**CENTRAL KENYA NATIONAL SCHOOLS JOINT MOCK - 2015**
Kenya Certificate of Secondary Education
312/1
GEOGRAPHY
PAPER 1
JULY/AUGUST 2015

<u>**SECTION A**</u>: **(25 MARKS)**
Answer all questions from this section.
1. (a) What is the relationship between Geography and Physics.   (2 marks)
   (b) Name the **three** main layer at the atmosphere from the earths surface upwards.   (3 marks)
2. (a) Name **three** types of coral reefs.   (3 marks)
   (b) What are the benefits of coral reefs in the areas they have developed?   (2 marks)
3. The diagram below show the formation of some type of rainfall.   Use it to answer question (a) and (b).
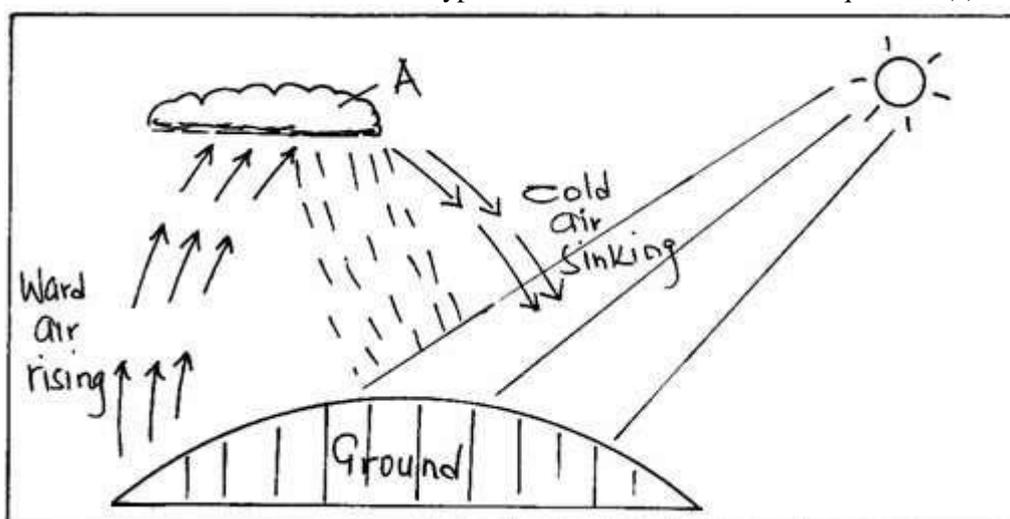
   (a) (i)   Name the type of rainfall shown by this diagram.   (1 mark)
              (ii)   Name the type of cloud marked **(A)**.
                 (1 mark)
      (c) List **three** weather conditions associated with the above name **(a)** type of rainfall.   (3 marks)
4. (a) (i)   State the plate tectonic theory.   (1 mark)
              (ii)   State **one** feature formed when:
      (i)   Tectonic plates move towards each other.   (1 mark)
      (ii)   The plates move away from each other at the boundary.   (1 mark)
   (b) State **three** effect of climate change.   (3 marks)
5. (a) What is a lake?   (2 marks)
   (b) Identify **two** reasons why most lakes within the Rift Valley are salty?   (2 marks) <u>**SECTION B: (75 MARKS)**</u>
   Answer question **6** and any other **two** questions from this section.
6. Study the map of Migwani 1:50000, (Sheet 151/1) provided and answer the following questions.
   (a) Citing evidence from the map, name **three** hydrographic features.   (3 marks)
   (b) Draw a rectangle measuring 10cm by 8cm to represent the area enclosed by Easting 90 and 00, and Northings 62 and 70.   (1 mark)
   On the rectangle, mark and name the following features.
   (i)   Musenyo School.   (1 mark)
   (ii)   Road E742.   (1 mark)
   (iii)   Kitui Hills.   (1 mark)

(c) (i) Describe the relief of the area covered by the map. (4 marks)
(ii) Citing evidence from the map, state **three** social services offered at Mutito trading centre. (3 marks) (d) Students of a school at Itoloni carried a field study at Gwani town.

(i) Name **two** types of road they used to travel to Gwani. (2 marks)
(ii) Name **one** man-made feature they found on the way to Gwani. (1 mark)
(iii) State **three** functions at Gwani town they identified. (3 marks)
(e) Describe **five** characteristics of the long profile of river Ikoo. (5 marks)

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7. (a) (i) Differentiate between rocks and minerals. (2 marks) (ii) Give **three** ways in which rocks can be classified. (3 marks)
    (b) (i) Name **one** example at each of the following types of sedimentary rocks.
        ☐ Chlorides. (1 mark)
        ☐ Arenaceous. (1 mark)
        ☐ Carbonaceous. (1 mark)
        (ii) Describe how sedimentary rocks are formed through physical processes. (4 marks)
    (c) (i) State **three** changes that occur in rocks during metamorphism. (3 marks)
        (ii) Give **two** reasons why sedimentary rocks are dominant along the Kenyan Coasts. (2 marks) (d) Students from Buma School carried a field study on rocks in their county.
    (i) State **three** reasons why it would be necessary for them to conduct a reconnaissance to the study area. (3 marks)
        (ii) Give **two** methods they used to record data. (2 marks)
        (iii) State **three** importance of rocks they identified. (3 marks) 8. (a) In aid of a well labelled diagrams describe the formation of the rift valley by tension. (8 marks) (b) The diagram below represents a feature formed by faulting. Use it to answer the question that follow.

Great uplift
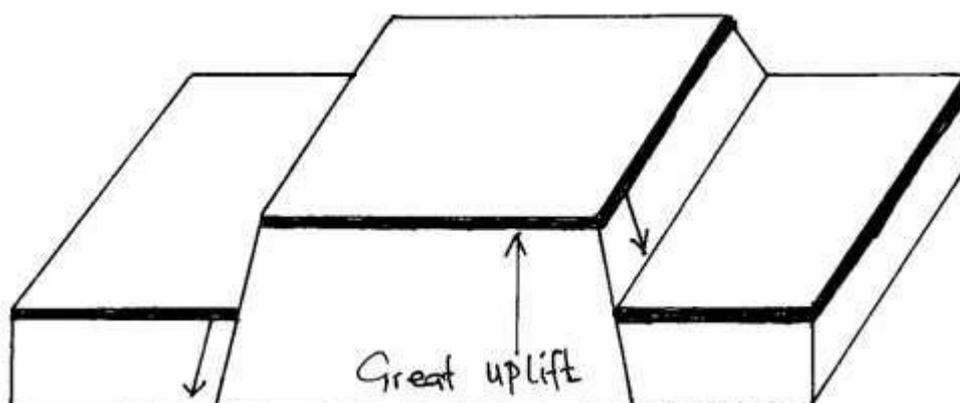
(i) Name the feature represented by the above diagram. (1 mark)
(ii) Describe the formation of the above mentioned feature. (5 marks)
    (c) You are supposed to carry out a field study in an area affected by faulting.
        (i) Apart from the Rift Valley name **three** other features that you are likely to identify. (3 marks)
        (ii) State **two** methods you will use to collect data. (2 marks)
        (iii) Explain **three** economic benefits of faulting they are likely to identify. (6 marks)
9. (a) (i) What is a desert? (2 marks) (ii) Name **two** types of deserts landscapes. (2 marks)
    (b) Describe how wind transport materials on the desert surface using the following processes.
        (i) Surface creep. (2 marks)

(ii) Saltation. (2 marks) (c) Using well labelled diagram(s) explain how Barchan is formed. (8 marks)

(d) You intend to carry out a field study in an arid area near your school.

(i) State **two** reasons for carrying out a pre-visit. (2 marks)

(ii) Apart from Brarchan state **three** depositional features they are likely to have identified. (3 marks)

(iii) State **four** positive effects of deserts features to man that you are likely to identify. (4 marks)

10. (a) (i) Define term soil conservation. (2 marks)

(ii) State **two** methods that assist in soil conservation. (2 marks)

(b) Explain how the following factors influence the soil formation.

(i) Climate. (3 marks)

(ii) Topography. (3 marks)

(c) (i) Describe how laterisation occurs. (4 marks)

(ii) State **two** ways in which humus improves the quality of soil. (2 marks)

(iii) State **four** characteristics of desert soils. (4 marks)

(d) (i) Describe how gulley erosion occurs. (3 marks)

(ii) State **two** economic uses soils. (2 marks) **CENTRAL KENYA NATIONAL SCHOOLS JOINT MOCK - 2015**

Kenya Certificate of Secondary Education
312/2
GEOGRAPHY
PAPER 2
JULY/AUGUST 2015

SECTION A: (25 MARKS)

Answer all questions from this section.

1. (a) Define the term transhumance. (2 marks)

(b) State **three** characteristics of nomadic pastoralism. (3 marks) 2. State **five** factors which influence nucleated settlement pattern. (5 marks) 3. (a) What is a cottage industry? (2 marks)

(b) Give **three** reasons why the government of Kenya encourages the establishment of Jua Kali Industries. (3 marks)

4. (a) What is air pollution? (2 marks)

(b) State **three** negative effects of uncollected garbage on the environment. (3 marks)

5. (a) Name **two** main reclamation projects in the Netherlands. (2 marks)

(b) State **three** reasons for reclaiming swamps in Kenya. (3 marks)

SECTION B: (75 MARKS)

Answer question **6** and any other **two** questions from this section.

6. The table below gives the figures for the 2009 population census per county for the central region of Kenya.

COUNTY	POPULATION
Kiambu	1623282
Murang"a	942581
Nyeri	693558
Nyandarua	596268
Kirinyaga	528054

(a) (i) Besides bar graphs, name three other methods that can be used to represent the above data. (3 marks)

(ii) Draw a simple bar graph to represent the data in the table above.

Use a scale of 1cm to represent 200,000 persons. (6 marks)

(iii) State **four** advantages of using bar graphs to represent statistical data. (4 marks)

(b) Calculate the population density for Kiambu County, given that its area is 2543.4 square kilometers.

(2 marks)

(c) Give **two** reasons why census is necessary. (2 marks)

(d) Explain **four** reasons for the high population density in Kiambu County. (8 mark

7. (a) (i) What is reafforestation? (2 marks)

(ii) State **four** reasons why afforestation should be encouraged in Kenya. (4 marks)

(b) (i) Name **two** main exotic softwood trees grown in Kenya. (2 marks)

(ii) State **five** characteristics of softwood forests in Canada. (5 marks)

(c) Explain **three** problems which hinder the Kenya government‟s effort to manage and conserve her forests.

(6 marks)

(d) Compare forestry in Kenya and Canada under the following headings:-

(i) Transportation of the logs. (2 marks)

(ii) Felling of trees. (2 marks)

(iii) Tree species. (2 marks)

8. (a) (i) What is sedentary farming? (2 marks)

(ii) Name **three** main types of agriculture. (3 marks)

(b) (i) Name **four** horticulture farms in Kenya. (4 marks)

(ii) State **five** reasons for growing flowers under green houses. (5 marks)

(c) Name **three** vegetable horticultural crops grown in Kenya. (3 marks)

(d) Explain **four** reasons why horticulture farming is more developed in the Netherlands than in Kenya.

(8 marks)

9. (a) (i) Name **three** modes of transport in Kenya. (3 marks)

(ii) State **four** problems facing communication in Kenya. (4 marks) (b) Explain **four** advantages of rail transport over road transport. (8 marks)

(c) Use the map of Africa below to answer the following questions.
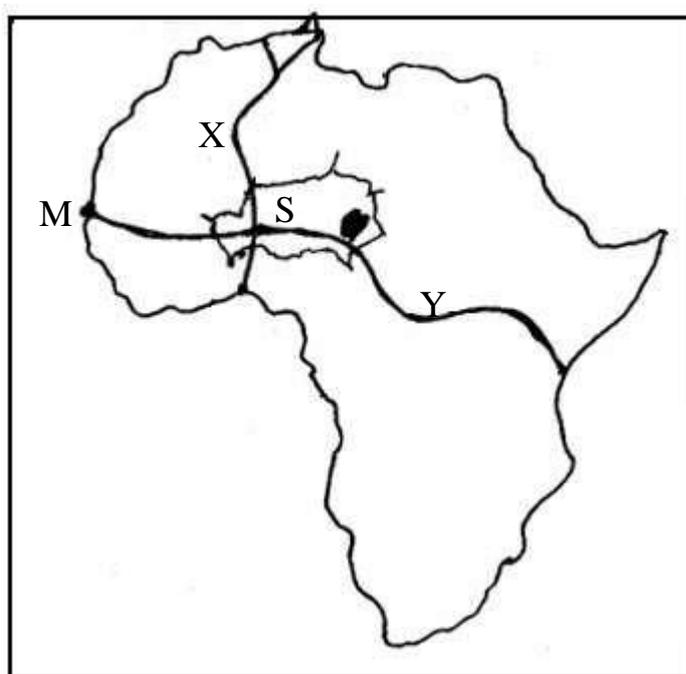
(i) Name the highways marked **X** and **Y**. (2 marks)

      (ii)   Name the port marked **M**.   (1 mark)

      (iii)   Name the country marked **S**.   (1 mark)

(d) (i) Give **two** reasons why it is difficult to transport goods from Mombasa to Lagos by road. (2 marks)

      (ii)   State **four** efforts that have been made to improve transport in Africa.   (4 marks)

10. (a) (i) Define international trade.   (2 marks)

 (ii) Name **three** major imports from Europe to Kenya.   (3 marks)

     (b)   States **four** factors that influence external trade in Kenya.   (4 marks)

     (c)   Explain **four** ways through which Kenya will benefit from renewed East African Co-operation.   (8 marks)

     (d)   Explain **four** negative effects of international trade.   (8 marks) **CENTRAL KENYA NATIONAL SCHOOLS JOINT MOCK - 2015**

312/1
GEOGRAPHY PAPER 1
MARKING SCHEME

SECTION A

1.

(a) The relationship between Geography and Physics

☐ Physics deal with matter, energy, light, heat, sound, gravity and magnetism while studying the atmosphere; Geography focuses on heat from the sun as its responsible for movement of air, evaporation or water and distribution of moisture in the atmosphere.

☐ Physics is a branch of Science concerned with study of matter and its properties; Physics is important in Geography as it is used to explain how important process such as faulting, folding and vulcanicity happen.

               (1 x 2 = 2mks)

(b) Three main layers of he atmosphere from the earth¨s surface upwards.

☐ Troposphere

☐ Stratosphere

☐ Mesosphere   (3 x 1 = 3mks)

2.

(a) Three types of coral reefs.

☐ Barrier reefs

☐ Fringing reef

☐ Atoll reef   (3 x 1 = 3mks)

(b) Benefits of reefs in the areas they have developed

☐ Sheltered water encourages growth of planktons / fish food.

☐ Shallow corals are a tourist attraction earning a country foreign exchange.

☐ Corals from a base of mining of limestone used in cement manufacture.   (2 x 1 = 2mks)

3.

(a) (i) Type of rainfall shown on the diagram

     Convectional   (1 x 1 = 1mk)

     (ii) Type of cloud marked (a)

     Cumulonimbus clouds   (1 x 1 = 1mk)

(b) Two weather conditions associated with the above (a) rainfall.

☐ Thunderstorm and lightening

☐ Hailstones

☐ Warm air near surface in the afternoon hours.   (1 x 1 = 1mk)

4.

(a) (i) State the plate tectonic theory..

     Plate tectonic theory states that the continental crust is made of blocks called plates which are mobile and move

either; away from each other, forwards each other or past each other.   (1 x 1 = 1mk) (ii)
a) Features formed when plates move towards each other
      ☐   Fold Mountains
      ☐   Formation of trenches
      ☐   Destruction of plates along their margins.   (1 x 1 = 1mk)
b) Features formed when plates move away from each other at the boundary
  ☐ Faults
      ☐   Extension boundary farming
      ☐   Mid ocean ridges   (1 x 1 = 1mk)

(b) Effects of climate change
☐ The global warming due to increase of greenhouse gases.
☐ Widespread changes in natural ecosystems.
☐ Rise in temperatures and increase in evaporation rates.
☐ Possible drought might increase in some countries e.g. China, Africa, Brazile etc.
☐ Wetter and warmer conditions increase pests and diseases which affect humans crops and livestock.
☐ May lead to Elnino /floods.
☐ May bring wetter and direr summers in temperate regions/melting of polar glaciers. (3 x 1 = 3mks)

5. (a) What is a lake
      A lake refers to an accumulation / body of water occupying a hollow or a depression on the surface of the earth.   (2 x 1 = 2mks)

(b) Why most of Rift Valley lakes are salty ☐
Some lakes lack outlets.
☐ Rocks over which they lie / in contact with may contain mineral salts.
☐ Some rivers pouring in them may contain salts.
☐ Surface runoffs and rivers may dissolve a lot of salts on rocks while they flow.
☐ Excess evaporation in areas where the temperatures are high.   (2 x 1 = 2mks)

SECTION B
6. Hydrographic features
(a) (i) Rivers ……… River Mui   (3 x 1 = 3mks)
      Dams ……….. Iloleni Dam
      Borehole ……….. grid square 0769

(b)
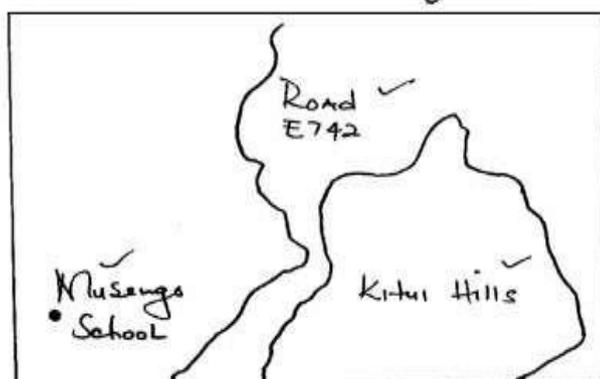
(1 x 4 = 4mks)

(c) (i) The relief of the area covered by the map
☐ The lowest altitude is 660m / the highest altitude is 1515 above sea level.
☐ The land rises from the East to the West.
☐ To the Easting 08, the landscape is generally hilly / has many hills.
☐ There are many interlocking spurs along River valleys.

☐ The landscape is dissected by river valleys.

☐ There are some abroad valleys in the South East.

☐ There are many narrow river valleys in the highlands.

☐ The land is gently sloping in the east.

☐ Thee are steep slopes in the hilly areas / to the west.

☐ Some areas in the East are flat.

☐ There are ridges in the central and south Western part.   (4 x 1 = 4mks)

(ii)

☐ Education – schools

☐ Health services – Health centre

☐ Administrative – Chief office

☐ Recreation – Rest house

☐ Legal services – Court house   (3 x 1 = 3mks)

(d) (i) All weather road (loose surface)

Dry weather Road   (2 x 1 = 2mks)

(ii) A dam   (1 x 1 = 1mk)

Function   Evidence

(iii)

☐ Trading centre   -   Shop

☐ Transport   -   Roads

☐ Administrative centre -   Chiefs officer

☐ Communication   -   Post office   (3 x 1 = 3mks)

(e)

☐ River Ikoo flows to the South East.

☐ The river has many meanders.

☐ The river becomes wider from grid square 0769.

☐ Here are interlocking spurs along the course of the river.

☐ The river has many small tributaries that form a dendritic pattern along the course.

☐ Some parts of the long profile have steep gradient.

☐ There are sand / mud deposits downstream.

☐ The river is permanent.   (3 x 1 = 3mks)

7.

(a) (i) Difference between rocks and minerals.

☐ Rocks are hard substances made up of mineral particles forming the earths crust while minerals are naturally occurring inorganic substances with definite chemical composition and physical properties.

                                                                    (2 x 1 = 2mks)

(ii) Ways in which rocks can be classified.

☐ By mode of formation

☐ By physical and chemical characteristics.

☐ By age.   (3 x 1 = 3mks)

(b) (i) One example of each of the following types of sedimentary rocks.

☐ Chlorides – rock salt / sodium chloride

☐ Arenaceous – sandstone / grit

☐ Carbonaceous – coal   (3 x 1 = 3mks)

(ii) How sedimentary rocks are formed through physical processes.

☐ Pre-existing rocks of sedimentary and igneous types undergo weathering and erosion.

☐ The weathered and eroded rock materials are then transported and deposited over the land or in the sea / ocean by wind, water or ice.

☐ The deposited weathered materials accumulate over time, become compacted and cemented for

    sedimentary rocks. (4 x 1 = 4mks)

(b) (i) <u>Changes that occur in rocks during metamorphism</u>

□ New minerals are formed.

  □ The rocks are hardened / become more resistant.

  □ The rock may recrystalize.

  □ The chemical composition of the rocks change.

  □ Physical characteristics / appearance of the rock changes is altered. (3 x 1 = 3mks)

  (ii) <u>Two reasons why sedimentary rocks are dominant along he Kenyan coasts</u>

  □ Some parts of the coastal plain emerged from the sea where sedimentation occurred.

  □ The coastal plain is lowland which has facilitated deposition of weathered rock materials.

  □ He shallow continental shelf provides favourable environment for he coral polyps whose skeletons
    are deposited and accumulate to form rocks. (2 x 1 = 2mks)

(c) (i) <u>Reasons for conducting a reconnaissance</u>

  □ To be familiar with study area / authorities.

  □ To estimate the cost / budget of the study.

  □ To assist / help in designing a working schedule.

  □ To determine study areas suitability.

  □ To identify in advance likely problems to be encountered during the study and suggest possible ways of
coping with / solving them.

  □ To enable decision making on data collection methods. (2 x 1 = 2mks)

  (ii) <u>Methods used to record data</u>

  □ Photographing / taking photographs / tape / video recording

  □ Taking notes

  □ Labeling samples

  □ Filling in questionnaires (2 x 1 = 2mks)

  (iii) <u>Importance of rocks they identified</u>

  □ Weathered rocks form rich agricultural soils for crop cultivation.

  □ Some rocks are used in building and road construction.

  □ Granite tars form spectacular / beautiful scenery that attracts tourists thus earning foreign exchange.

  □ Some rocks form water reservoirs that are exploited for domestic uses.

  □ Rocks mined in quarries provide income and improve living standards.

  □ Some valuable minerals may be mined from the rocks. (2 x 1 = 2mks)

8. (a) Formation of the Rift Valley
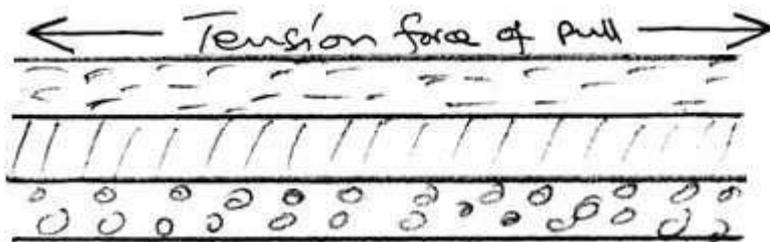
Layers of rocks are subjected to Tensional forces which pull away from each other (2mks)
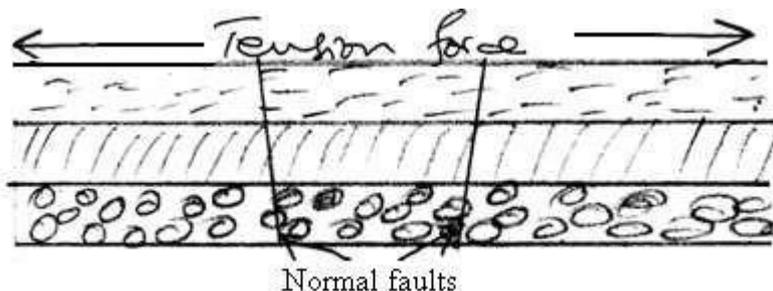
Lines of weaknesses appear Leading to development of adjacent normal faults (2mks)

The side blocks are pushed apart. The middle block sinks leading to the formation of the Rift valley. (2mks)
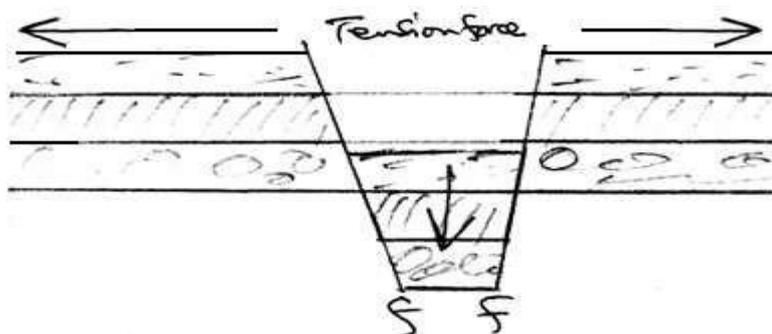
(Diagrams ‒ 2 marks)
Total ‒ 8 marks

NB:

☐ Illustrations should be accompanied by description.
☐ A diagram without description can earn a mark but description without a diagram cannot.

(b) (i) Features represented by the diagram
A tilt block
(ii) Formation of the feature
☐ Form when a block of land between two faults is uplifted due to compressional forces.
☐ The middle block experiences greater uplift on one side. ☐ As a result the fault block is not flat at the top but tilted.
☐ The resultant feature is shown as a tilt block since it"s tilted on one side. (5 marks) (c) (i)
Features that may form as a result of faulting.
☐ Fault scarps / Escarpments
☐ Block / Horst Mountain

☐   Tilt block   (3 x 1 = 3mks)
(ii) <u>Methods to collect data</u>
☐   Administering questionnaires
☐   Including interviews
☐   Through direct observation
☐   Through content analysis   (2 x 1 = 2mks)
(iii) <u>Economic benefits of faulting</u>
☐   Lakes associated with faulting are good fishing grounds / mining etc.
☐   Hot water coming through faults are utilized o produce geothermal power.
☐   Scarp springs on foot of scarps provides water for domestic use.
☐   Features associated with faulting form beautiful scenery for both local and foreign tourists hence foreign exchange.
☐   Rivers from faulting provide water for irrigation, domestic and generation of energy.
☐   Faulting has exposed minerals which have been mined hence providing foreign exchange for the country.

                                                                                              (3 x 2 = 6mks)

9. (a) (i)   <u>What is a desert?</u>
☐   It is an arid area with scarcity of rainfall and with little or no vegetation cover. (2mks) (ii) <u>Desert landscapes</u>
☐   Sandy deserts / Erg / Koum
☐   Rocky desert / Hamad
☐   Stony desert / Reg / Semr
☐   Batkabds   any 2   (2 x 1 = 2mks)
(b) (i)   <u>Surface creep</u>
Heavy pebbles / stones pushed / rolled by wind currents for short distances.   (2mks)
  (ii)   <u>Saltation</u>
☐   Medium sized particles rolled along the ground and then lifted by wind currents to the air and then dropped – moved in a series of short jumps along the desert surface.   (1 x 2 = 2mks)
  (ii)   <u>Barchan</u>
☐   Prevailing wind is interrupted by an obstacle leading to deposition of sand around the obstacle – where sand piles up to form a low hill of sand
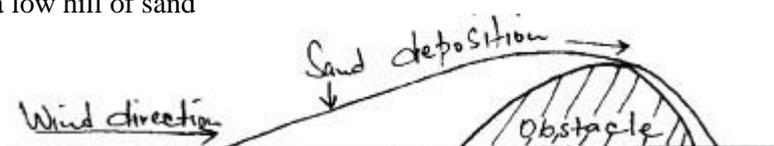
Wind pushes more sand over the sand hill to form a gently sloping convex windward.

☐   The wind cross over the hill and form eddy currents on the leeward side which push sand forward and side ways to create a shallow depression and a steep concave slope.

☐

- ▢ The sand pushed forward form sharp edges or horns on the leeward side.
- ▢ The process forms a crescent-moon shaped low ridge of sand at a right angle to the prevailing wind direction called barchans.
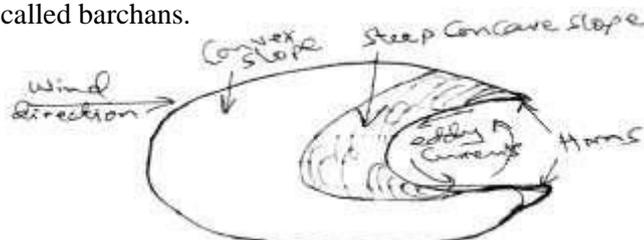

Diagram – 3mks
Text – 4mks
Total – 7mks

(ii) X – Horizontal layer of hard rock / resistant rock.
   Y – plunge pool
   Z – Rock boulders

(d) <u>Field study</u>
   (i) <u>Reasons for a pre-visit</u>
   ▢ Familiarize with the area of the study.
   ▢ Determine routes to follow
   ▢ Decide on the methods of data collection and recording. ▢ Know materials / equipment to carry.

- ☐ Identify likely problems and seek for solution.
- ☐ Helps formulate relevant objectives and hypothesis.
- ☐ Helps draw a working schedule.

(ii) <u>Depositional features.</u>
- ☐ Self dunes.
- ☐ Transverse dunes.
- ☐ Drass.
- ☐ Coess.

(iii) <u>Positive effects of desert features to man identified.</u>
- ☐ A scenery that attracts tourists.
- ☐ Extreme ground for testing bombs / films development.
- ☐ Sand harvested for building and construction industry.
- ☐ Loess deposit areas rich for agriculture.
- ☐ Oasis provide water for settlement / livestock.
- ☐ Salts from playas / salines exploited for income.
- ☐ Strong winds tapped for energy / hot sun for solar energy.
- ☐ Loess deposits curved into cool dwellings in summer. (4 x 1 = 4mks)

10.
(a) (i) <u>Definition of soil conservation</u>
- ☐ It is careful management / protecting of soil against erosion and exhaustion. (2mks) (ii) <u>Methods hat assist in soil conservation.</u>
- ☐ Ploughing across the contours / slopes
- ☐ Stripping cropping
- ☐ Controlled grazing. (2 x 1 = 2mks)

(b) <u>How they influence soil formation</u>

(i) <u>Climate</u>
- ☐ It influences types and rate of weathering.
- ☐ High rainfall influences leaching process run offs resulting from high rainfall increases rate of erosion.
- ☐ It influences rate of decomposition.
- ☐ High temperature increases rate of weathering / occelanate bacterial activity.
- ☐ Water transports and deposits soil particles on other areas hence new soils. (3 x 1 = 3mks)

(ii) <u>Topography</u>
- ☐ Bottom valley / gentle slopes encourage formation of deep soils (fertilizers) due to deposition / accumulation of minerals, steep slopes encourages soil erosion of top layers hence soil erosion of soils. ☐ Flat plains are associated with water hence slow down soil formation ☐ Slopes influence management of soil catena.
- ☐ Some slopes are more exposed to rain / sun hence influencing weathering of parent rock.(3 x 1 = 3mks)

(c) (i) <u>Laterisation</u>
- ☐ During wet season, mineral salts in the top layers of soils dissolves rain water. The dissolved minerals percolates downwards to lower layers. The dissolved minerals are deposited further downwards to he lower layers. Insoluble minerals e.g. iron and alluminium are left on the upper layers to form a curst of laterite soils. (4 x 1 = 4mks)

(ii) <u>How humus improves quality of soil</u>
- ☐ Helps improve soil porosity by operating the soils.
- ☐ Improves moisture-retention capacity of the soils.
- ☐ Humus provides essential minerals to the soil.
- ☐ Improves the soil texture. (2 x 1 = 2mks)

(iii) <u>Characteristic of desert soils</u>
- ☐ They are thin and shallow generally saline.
- ☐ Hey are stony / sandy – they are coarse textured and quite porous.
- ☐ Lack humus / low organic matter content.
- ☐ Have low moisture content. (4 x 1 = 4mks)

(d) (i) <u>How Gulley erosion occurs</u>
- ☐ Occurs on steep slopes
- ☐ Rain water cuts deep groves / channels / rills on the slopes.

☐ Channels are widened and deepened to form gullies through which soils are carried away. (3 x 1 = 3mks) (ii) <u>Economic uses of soils</u>

☐ They are sources of valuable minerals.

☐ Soils are used as raw materials for pottery.

☐ They are used for agriculture.

☐ Some soils are mixed with herbs for medicinal purposes e.g. clay / soil directly for food.

(2 x 1 = 2mks)

CENTRAL KENYA NATIONAL SCHOOLS JOINT MOCK - 2015
312/2
GEOGRAPHY PAPER 2
<u>**MARKING SCHEME**</u>

1.

(a) <u>Define the term transhumance.</u>

It is seasonal movement of people and their animals from place to place, in search of water and pasture for their animals. (2mks)

(b) <u>Characteristics of nomadic pastoralism.</u>

☐ Reared in areas receiving low and unreliable rainfall.

☐ Animals are grazed communally.

☐ Animals are kept for subsistence / sign of wealth.

☐ Nomadic herders make use of natural pasture.

☐ Different types of animals are kept e.g. sheep, goats and cows. ☐ Quantity as opposed to quality is emphasized.

☐ Man˝s social positions and prestige determined by number of animals kept.

☐ Poor marketing of animals and their products.

☐ Lack of organized land tenure where land is owned communally. (3 x 1 = (3mks)

2. <u>Factors influencing nucleated settlement pattern.</u> ☐

Farming – irrigation farming e.g. Mwea Tebere.

☐ Limitations of site, lack of space for expansion.

☐ Presence of water sources e.g. Oasis in desert.

☐ Exploitation of natural resources e.g. mining.

☐ A prime area for defence / cluster together for strength.

☐ Government policy – settlement schemes.

☐ Ownership of land in small plots.

☐ Presence of an industrial plan.

☐ Security leading to cluster in a more secure area. (5 x 1 = (5mks) 3.

(a) <u>What is a cottage industry?</u>

It is a small scale industry which uses local raw materials and requires little capital to start and operate.

(2 x 1 = 2mks)

(b) <u>Reasons why government encourages the establishment of Jua Kali.</u>

☐ It requires little capital investment.

☐ It decentralizes industries reducing rural urban migration.

☐ Requires little skills.

☐ Encourages innovation.

☐ To diversify export goods.

☐ To cater for local needs / save on foreign exchange, ☐ To produce cheap consumer goods.

☐ To make use of locally available raw materials.

☐ To create employment opportunities. (3 x 1 = (3mks)

4.

(a) <u>What is air pollution?</u>

It is the contamination of air with additional material in solid or gaseous form causing injury or harm to human health or property.   (2 x 1 = (2mks)

(b) <u>Negative effect of uncollected garbage.</u>
☐ Garbage heaps are unattractive.
☐ Garbage produces foul smell.
☐ Garbage washed into water surfaces causes pollution.
☐ Organisms that thrives in garbage may transmit diseases.
☐ Some matter may cause injuries.   (3x1 = (3mks)

5.
(a) <u>Two main reclamation projects in Netherlands.</u>
☐ The Zuider Zee project – 5 polders
☐ The Delta Plan Project – 5 polders   (2 x 1 = (2mks)

(b) <u>Three reasons for reclaiming swamps in Kenya.</u>
☐   To free area from pest / water borne diseases.
☐   To reduce flooding and associated effects.
☐   To acquire agricultural land with profitable farming / settlements.
☐   To develop the remote areas with infrastructure and social amenities. (3 x 1 = (3mks) 6.

(a) (i) Other methods of data representation.
    ☐ Divided rectangles
    ☐ Proportional circles
    ☐ Pie chart

    (ii) <u>Simple bar graph</u>
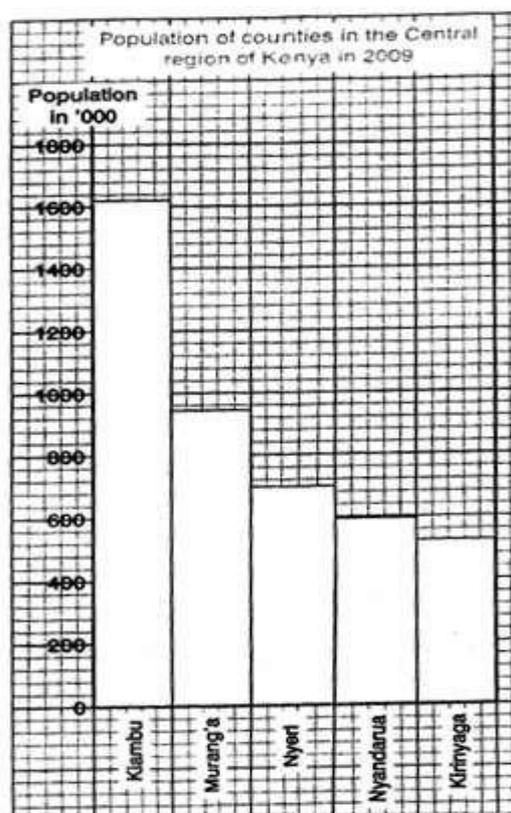
Correct bars	= 5mks
Y-axis	= ½mk
X-axis	= ½mk
Total	= 6mks

(iii) <u>Advantages of using bar graphs</u>
    ☐ They are easy to construct.
    ☐ Bars and individual units are suitable to present population of countries.

- ☐ It is easy o compare quantities.
- ☐ Give good visual impression. (4 x 1 = (4mks)

(b) <u>Population density of Kiambu</u>

$$\frac{1,623,282}{2543.4} = 638 \text{ persons per square kilometers}$$

(c) <u>Reasons why census is necessary.</u>

- ☐ Helps to plan for provision of basic facilities.
- ☐ Helps to plan for jobs.
- ☐ Helps to assess the resources available.
- ☐ Helps to assess the resources available and existing population (Economic / Social)
- ☐ Helps to decide administrative areas. (2 x 1 = (2mks)

(d) <u>Reasons for the high population density in Kiambu County.</u>

- ☐ Fertile volcanic soils which favour high agricultural production.
- ☐ Cool climate which favours growth of commercial crops like tea and coffee.
- ☐ Adequate water supply for domestic use and for irrigation of crops.
- ☐ Nearness to Nairobi.
- ☐ Availability of health facilities- reduced death rates and improved nutrition.
- ☐ The county receives high rainfall in most areas which support agriculture and livestock farming.

(4 x 2 = (8mks)

7.

(a) (i) <u>What is reafforestation?</u>

This is the planting of trees in areas where forests have been cleared / deforestation has taken place.

(2 x 1 = (2mks)

(ii) <u>Four reasons why afforestation should be encouraged in Kenya.</u>

- ☐ To ensure continuous supply of wood fuel (timber) / herbal medicine / raw materials for paper making.
- ☐ To protect water catchment areas / create micro-climates to maintain hydrological cycle.
- ☐ To create scenic beauty.
- ☐ To expand the habitat for wildlife / conservation of wildlife.
- ☐ To create employment opportunities.
- ☐ To reduce importation of forest products / foreign exchange. (4 x 1 = (4mks) (b) (i)

<u>Main exotic softwood trees grown in Kenya.</u>

- ☐ Cypress
- ☐ Pine (2 x 1 = (2mks)

(ii) <u>Characteristics of softwood forests in Canada.</u>

- ☐ The trees are conical in shape.
- ☐ Trees occur in pure stands.
- ☐ Trees are tall.
- ☐ Trees have straight trunks.
- ☐ Trees bear cones.
- ☐ The forests have no undergrowth.
- ☐ The trees have thick barks.
- ☐ Trees have shallow roots. (5 x 1 = (5mks)

(c) <u>Problems which hinder the Kenya government effort to manage and conserve forests.</u>

- ☐ Rapid increase in population has led to encroachment into forest land hence destruction of trees.
- ☐ Occurrence of forest fires which have led to destruction of large areas under forest.
- ☐ Illegal logging / indiscriminate cutting of trees thereby reducing / depleting indigenous species.
- ☐ Attacks by pests / diseases lead to destruction of trees.
- ☐ Some wild animals damage trees through uprooting / trampling debarking.

☐ Prolonged drought leads to drying of some trees. (3 x 2 = (6mks)

(d) <u>Comparison between forestry in Kenya and Canada.</u>

    (i)   <u>Transportation of logs</u>

☐ In Canada, logs are transported using melt water rivers while in Kenya transportation is by road.

☐ In Canada, logs are transported using melt water / Rivers while in Kenya transportation is by road.

                        (2 x 1 = (2mks)

    (ii) <u>Felling trees</u>

☐ In Canada felling is done in winter while in Kenya it takes place throughout he year.

☐ In Canada harvesting is done through clear cutting while in Kenya it is selective cutting.

☐ In both countries, commercial logging is mechanized. (2 x 1 = (2mks)

    (iii) <u>Tree species</u>

☐ In both countries some tree species are similar e.g. pine.

☐ In Canada softwood tree species are indigenous while in Kenya they are both exotic / indigenous.

                        (2 x 1 = (2mks)

8. (a) (i) <u>Sedentary farming</u>

       Is the cultivation of crops and rearing of livestock for subsistence or commercial reasons where people have permanent settlements.

    (ii) <u>Main types of agriculture.</u>

☐ Arable / crop farming / subsistence or commercial crop farming.

☐ Livestock farming / dairy or beef farming.

☐ Mixed farming – crops and livestock farming. (3 x 1 = (3mks)

(b) (i) <u>Four horticultural crops in Kenya.</u>

    ☐ Delmonte

    ☐ Kakuzi Ltd

    ☐ Dalmena holdings

    ☐ Shah Karuturi flowers

    ☐ Oserian

    ☐ Finley Ltd

    ☐ Vegpro Kenya

    ☐ Beauty Line flowers

    ☐ Suera flowers (4 x 1 = (4mks)

    (ii) <u>Five reasons for growing flowers under green houses.</u>

☐ To reduce destruction of plants by excessive rainfall and hailstones / excessive sunlight.

☐ For easy control of pests and diseases.

☐ To protect plants from damaging winds and air borne diseases.

☐ Helps grow plants throughout the year as irrigation water can be supplied / intensive farming.

☐ To regulate temperatures / warmth required by flowers / crops.

☐ To control moisture for plants growth. (5 x 1 = (5mks)

(c) <u>Three types of vegetable horticultural crops grown in Kenya.</u>

☐ Carrots

☐ Cabbages

☐ Onions

☐ Peas

☐ French beans

☐ Broccoli

☐ Cauliflower

☐ Chillies

☐ Capsicum

☐ Kales (3 x 1 = (3mks)

(c) <u>Four reasons why Horticulture farming is more developed in Netherlands than in Kenya.</u>

☐ There is higher local demand (market) for horticultural crops in the Netherlands than in Kenya.

☐ The Netherlands has a long history of horticulture than Kenya.

☐ Netherlands farmers are well organized making it easy to access loans.

☐ There is more advanced and appropriate technology in Netherlands while Kenya has low level advancement of technology.

☐ Netherlands has well-developed and efficient transport network is poor.

☐ The Netherlands has highly skilled labour for production whereas Kenya has a shortage of skilled labour.

☐ In Netherlands there is advanced research in the industry while in Kenya research is less advanced.

(4 x 2 = (8mks)

9. (a) (i) <u>Modes of transport</u>

    ☐ Land

    ☐ Water

    ☐ Air (3 x 1 = (3mks)

(ii) <u>Problems facing communication in Kenya.</u>

    ☐ Inadequate capital to install communication equipment.

    ☐ Language barriers due to diverse ethnic backgrounds / low levels of education.

    ☐ Inadequate communication facilities.

    ☐ Vandalism of communication equipment / wars.

    ☐ Inefficient communication systems /Networks failure. (4 x 1 = (4mks)

(b) <u>Advantages of rail transport over road transport.</u>

☐ Railways are more reliable and efficient because they follow fixed time schedules unlike roads which have no fixed timetable.

☐ Railways can be used to move heavy and bulky goods at low rates over distance compared to roads which are expensive over short distances.

☐ Once built, railways do not require frequent relaying unlike roads which are frequent resurfaced.

☐ Railways are normally narrow hence economical in terms of landscape used by rails. Roads take a lot of space on some area very wide.

☐ Railways are less susceptible to traffic jams unlike roads which usually have traffic jams.

☐ Trains are less prone to accidents than roads

☐ Passenger trains have facilities like accommodation, dining and tolls which makes passengers comfortable while traveling unlike in road transport. (4 x 2 = (8mks)

(c) (i) <u>Highways</u>

      X – Trans Saharan highway

      Y – Trans Africa highway

    (ii) M – Dakar

    (iii) S – Chad

(d) (i) <u>Reason for difficulties in transporting goods from Mombasa to Lagos.</u>

    ☐ Traffic charged at border points increase transportation costs.

    ☐ There is long distance between he two parts which would take a long time.

    ☐ Some parts of the highway are impassable during wet seasons.

    ☐ There are evil wars / banditry along the way e.g. DRC

    ☐ There are political differences and hostilities between some countries through which the highway passes.

(2 x 1 = (2mks)

    (ii) <u>Effort made</u>

☐ Construction of highways across the continents.

☐ Construction of international railways with similar gauge.

☐ Construction of natural and international airport. ☐ Establishment of regional / economic

☐ Cooperation e.g. COMESA, EAC etc.

- ☐ Sourcing of funds from external lending bodies e.g. World Bank, IMF.
- ☐ Diversifying form of transport.
- ☐ Invest in training to equip citizen with the technical skills linked with transport section.
- ☐ Reservoir have been constructed across source rivers to improve navigation e.g. L. Kariba along River Zambezi. (4 x 1 = (4mks)

10. (a) (i) International trade is the exchange of goods and services between different countries. (ii) Major imports from Europe to Kenya.
- ☐ Machinery
- ☐ Capital equipment
- ☐ Fertilizers
- ☐ Automobiles
- ☐ Medicine / pharmaceutical products. (3x 1 = (3mks)

(b) Factors that influence imports and exports to Kenya.
- ☐ Government policy / government legislation / imposition of tariffs on imports.
- ☐ Demand for goods both locally and outside Kenya.
- ☐ Variation of natural resources / quality of goods.
- ☐ Availability of transport / communication.
- ☐ Purchasing power.
- ☐ Level of industrialization.
- ☐ Quota system. (4 x 1 = (4mks)

(c) Ways in which Kenya benefit from renewed EAC
☐ Improved access to raw materials for industries.
- ☐ Expanded market which attract investors.
- ☐ Exchange of research findings.
- ☐ Improved negotiating powers in international areas.
- ☐ Improved transport links between East Africa.
- ☐ Increased employment opportunities.
- ☐ Mutual political understanding between Kenya and its neighbours. (4 x 2 = (8mks)

(d) Negative effects of international trade.
- ☐ Overspecialization / overdependence on a particular item is risky incase of a fall in price.
- ☐ Imported items may be a threat to local industries.
- ☐ Some imported products are sub-standard.
- ☐ May result to over exploitation to natural resources leading to depletion. (4 x 2 = (8mks)

GATUNDU SOUTH FORM FOUR 2015 EVALUATION EXAM
312/1
GEOGRAPHY
PAPER I
JULY/AUGUST 2015
TIME: 2 ½ HOURS

SECTION A;
Answer all the questions

1. a) State any three reasons why we study geography. (3 marks) b) Give three forces that are responsible for the spherical shape of the earth. (3 marks) 2. a) State the effect of crossing the international dateline from West to East. (2 marks) b) Explain the three reasons why the interior of the earth is believed to be still hot. (3 marks)

3. a) State two factors that are considered in locating a weather station. (2 marks) b) Give any three qualities of a Stevenson screen. (3 marks)

4. a) Differentiate between river rejuvenation and river capture. (2 marks) b) Highlight any three conditions necessary for river capture to occur. (3 marks)

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5.   a) Outline any four differences between volcanic/extrusive and plutonic/intrusive rocks.

SECTION B

Answer question 6 and any other two questions.

6.   Study the Migwani map sheet 151/1 scale 1:50,000 and use it to answer the questions.

a) (i)   Give the six figure grid references of Kauma dam to the south west of the map extract.   (2 marks)

ii)   Measure the approximate distance of all weather loose surface road to the north west of the map.

(2 marks)

iii)   Identify two ways of relief representation on map.   (2 marks)

b) i)   Measure the bearing of Kyawea trigometrical station (922643) from Kagondi School 905701.

(2 marks)

ii) Calculate the area enclosed by all weather loose surface road to the North west of the map extract.   (2 marks)

iii) Draw a square 15cm by 15cm to represent a section of the map enclosed by easting 00 and northing 70. On it mark and name the following features;

a)   Mboni dam
b)   Dry weather road
c)   Iko shops
d)   River iko
e)   Escarpment   (5 marks)

c) (i) Citing evidence from the map, state any three services offered at Mbito Ndoa. (3 marks)   (ii) Identify two types of vegetation found along northing 68.   (2 marks)

(iii)   Describe the drainage of the area covered by the map.   (5 marks)

7.   (a) (i)   Define the term drainage basin.   (2 marks)

(ii) Mention any three types of river erosion.   (3 marks)

(iii) Describe the process of abrasion in river erosion.   (3 marks)

(iv) State and explain the four processes in which the river transports its load. (8 marks)

Students of Kambi were to carry out a field study of a river in an area.

(b) (i) State any three reasons why they needed a route map of the area.   (3 marks)

ii)   Give two features that they may have observed and studied.   (2 marks)

iii) State any two problems that they may have observed and studied.   (2 marks)

iv) Mention any two follow up activities that they could have taken.   (2 marks)

8.   a) (i) Define the term faulting   (2 marks) (ii) Mention three types of features associated with faulting. (3 marks)

(iii)   With the help of a diagram explain the formation of the rift valley through the tension process.

Supposing you were to carry out a field study on the Rift Valley.   (7 marks) b) (i)   State any two objectives of the study.   (2 marks)

(ii)   State three importance of studying faulting through field work.   (3 marks)

(iii)   Explain the significance of faulting to human activities.   (8 marks)

9.   (a) (i) What is a rock?   (2 marks)

(ii) State two reasons why sedimentary rocks are wide spread in the coastal plain. (2 marks)

(b) (i)   State four changes that may occur in sedimentary rocks when they are subjected to intense heat and pressure.   (4 marks)

(ii)   Describe three processes through which sedimentary rocks change into metamorphic rocks.

(6 marks)

c) Describe how coral rocks are formed.   (5 marks)

d) Suppose you were to carry out a field study of rocks within your school vicinity.

i)   Name three secondary sources of information you would use to prepare for the field study.

(3 marks)

ii)   State three activities you would carry out during the field study.   (3 marks)

10. (a) (i)   Differentiate between a spring and a well   (2 marks)

ii) State four conditions favouring formation of artesian well.   (4 marks)   b). (i) What is a Karst scenery?   (2 marks)

(ii) Name five features formed on the surface in a Karst area.   (5 marks)   c). With the aid of well labeled diagrams describe how a limestone pillar is formed.   (6 marks)

d) Explain the significance of Karst scenery to human economic activities.   (6 marks) **GATUNDU SOUTH FORM FOUR 2015 EVALUATION EXAMINATION**

(312/2)

GEOGRAPHY

PAPER II

QUESTION

SECTION A

1   a) Define the fisheries   (2mrks)   b) State three ways in which marine fisheries in Kenya can be conserved   (3mrks)

2   a) State four factors that influence development of industries in Kenya   (4mrks)

b) Identify three factors that favored the location of cement processing plant Athi River near Nairobi (3mrks)

3 a) State three factors that favor the growth of forest on Mt Kenya   (3mrks)

b) Name two types of indigenous hard wood trees found in Kenyan forests.   (2mrks)

4 a) State three main functions of rural settlements.   (2mrks)

b) List three factors that led to the location of Mombasa as a city and port .   (3mrks)

5 List three forms of telecommunication services in Kenya   (3mrks)

SECTION B

6. Use the table below showing the number of tourists who visited Tanzania between the year 2010 and 2013

Origin/year	2010	2011	2012	2013
KENYA	100,000	80,000	60,000	40,000
SPAIN	80,000	50,000	45,000	45,000
ITALY	70,000	40,000	35,000	30,000

6   a) (i) Using a scale of 1cm to represent 20,000 tourists, draw a cumulative compound bar graph to represent this data   (8mrks)

(ii) Find out the number of tourists who visited Tanzania in the year 2011   (2mrks)   b) State three advantages of the technique used in (a) above   (3mrks)

c) Differentiate   between a national park and a game reserve   (4mrks)

d) (i) Explain the significance of tourism to Tanzania   (5mrks)   (ii) Name three main tourist attraction in Kenya   (3mrks)

7 a) (i)   State three levels of monetary trade   (3mrks)

(ii)   Outline four factors that influence trade   (4mrks) b) Explain three ways in which trade is of significance to Kenya's economy   (6mrks)

c) (i)   Outline form roles played by the common market for eastern and southern Africa in the economy of

its member state.   (4mrks)

(ii   Identify four problems facing regional trading block in Africa   (4mrks)

d) Explain the meaning of the following   terms   .

i)   Balance of trade   (2mrks)

ii)   Invisible trade   (2mrks)

8   a) i)   Name two diseases that affect sugarcane   (2mrks)

ii)   Name two main pests that affect sugarcane crop   (2mrks)

b) Give four ways in which sugar   is used   (4mrks)

c) Give   four physical conditions that favour sugar cane growing   (8mrks)

d) Describe the steps involved in sugar processing after the cane is harvested   (9mrks)

9   a) Define the term wildlife   (2mrks)

    b) Explain four physical factors that influences the distribution of wildlife in east Africa   (8mrks)

c) What are the problems facing wildlife in Kenya   (8mrks)

d) Student of Karatu high school intend to visit a National park near their school

    i)   Outline   the objectives for the visit   (4mrks)

    ii)   Indentify the methods they could use to collect the data   (3mrks)

10 a) i) define   the   term   forest   (2mrks)

    ii) Describe the characteristic of tropical hardwood forest   (8mrks)

b) Explain four major factors that influences the distribution and types of forest   (8mrks)

c) Discuss softwood forest in Kenya and Canada under the following subheadings.

    (i)   Tree species   (2mrks)

    (ii)   Marketing   (2mrks)

    d) Student of Gakoye high school carried out a study in a local forest .What problem are they likely to experience

                                        (3mrks)

GATUNDU SOUTH FORM 4 2015 EVALUATION EXAM
312/1
GEOGRAPHY
PAPER 1

<u>CONFIDENTIAL</u>
MIGWANI MAP 151/1

GATUNDU SOUTH FORM FOUR 2015 EVALUATION EXAM
312/1
GEOGRAPHY
PAPER I

<u>**MARKING SCHEME**</u>
<u>**SECTION A**</u>

1.
a) Three reasons why the study of geography is important.

☐ It helps to develop skills e.g. interviewing.

☐ It helps the learners to understand/appreciate different environmental influences.

☐ It encourages international awareness/co-operation.

☐ It helps the learners to appreciate important social values e.g. co-operation.

☐ It promotes positive attitudes towards conservation and protection of resources.

☐ It helps the learners to manage time properly.

☐ It leads to development of career opportunities.

☐ It enables learners to explain the origins of earth and other land forms.   3 x 1 = 3 marks

b) Three forces that are responsible for the spherical shape of the earth are: a)
    Force of gravity
    b) Centrifugal force
    c) Centripetal force   (3 marks)

2.
a) The effect of crossing the international dateline from West to East is

☐   1 day is gained

☐ The time is adjusted by 24 hours ahead (2 marks) b)
Three reasons why the interior of the earth is still hot.
   i) The original heat is still retained – Much of the original temperature/heat is retained as the interior cooled slower.
   ii) Radio activity: Radio active materials exploding periodically within the interior of the earth due to nuclear fusion produce a lot of heat.
   iii) The weight of the crustal rocks – The heavy rock materials exert a lot of pressure which generates a lot of heat making the interior very hot. (3 marks)

3.
a) Two factors considered in locating a weather station.
☐ It should be away from buildings/trees vegetation and other relief features to give accurate measurement.
☐ Security the place must be fenced to ensure security of equipments.
☐ It should be on an open ground to allow free flow of air.
☐ The ground should be gently sloping or relatively flat to protect flooding. (2 marks)

b) The qualities of a good Stevenson screen giving reasons for the quality. ☐ It should be painted white – to reflect excess light and heat
☐ It should have louvered sides – to allow free circulation of air.
☐ Raised at a height of 121cm above the ground to prevent direct radiation from the earth surface.
☐ Should have metallic stand to prevent termites" destruction.
☐ Have insulated double roof to prevent suns heat from reaching the inside of the screen. (3 marks)

4.
a) Differentiate between River Rejuvenation and River capture.
☐ River rejuvenation is the rebirth of a river erosive power.
   The revival/renewal of the rivers erosive activity.
☐ River capture – This is the diversion of the head waters of a weaker river into the system of adjacent more powerful river. (2 marks)

b) Three conditions for the river capture to occur.
   i) The two rivers (pivate river and misfit river) flow in adjacent valley.
   ii) Pirate river must be flowing in a wider valley/through areas of soft rocks.
   iii) The pirate river must have more active head ward erosion than the weaker river;
   iv) The pirate river should be flowing at a lower level or lower slope than the weaker one. (3 marks)

5. Outline any four differences between volcanic/extrusive and plutonic/intrusive rocks.

| Volcanic/Extrusive	Intrusive/Plutonic
1. They cool rapidly	- Cools slowly
2. They form small crystals	- They form large crystals
3. They are fine in texture	- They are coarse grained or they have a coarse texture.
4. They are formed from cooling and solidification of lava.	- They are formed from cooling and solidification of magma.

(4 x 1 = 4 marks)

Question total = 25%

6. Migwani Map
   They six figure grid reference of
   i) Kauma dam. 902624 (2 marks)
ii) The approximately distance of all weather road loose surface road to the north west of the map.
   11kms (2 marks)   iii) Two ways of representing relief on the map are:
   ☐ Trigonometrical station
   ☐ Contours
 b) (i) The bearing of Kyawea trigonometrical station (9226430) from Kagondi school (905 701) is
        165º (164º – 166º) (2 marks)
        ±1

ii) The area of the enclosed by all weather loose surface road to the north west of the map extract is
8km^2 (2 marks)
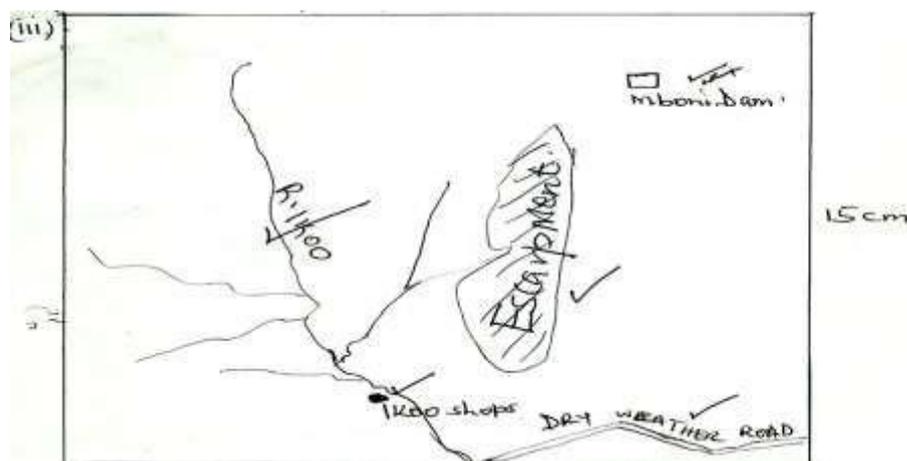
c. (i) Three social services offered at Mtito Ndoa are:-

Service		Evidence
i) Health/medical ii)	☐	Health centre
Religious services	☐	Hospital
iii) Administration	☐	Church
iv) Water supply v)	☐	Chiefs office
Education vi)	☐	Water pipe
Transport vii)	☐	School
Communication	☐	Dry weather roads
	☐	Post office

Any 3 x 1 = 3 marks

(ii) Identify two types of vegetation found along northings 68.
☐ Scrub vegetation
☐ Scattered trees
☐ Papyrus swamp mash, bog   Any 2 marks   iii) Describe the drainage of
the area covered by the map.
☐ There are many permanent rivers ☐ The river rises from West to East.
☐ The river forms dendritic pattern
☐ The main river is Ikoo
☐ Some rivers are seasonal ☐ There are dams
☐ There is a borehole.
☐ Rivers to the north west forms radial drainage pattern.
☐ There is a spring
☐ There is a water tank.   Any 5 x 1 = 5 marks
                                    Question total = 25 marks 7. a)
(i) Drainage basin definition
☐   Drainage basin is the entire area drained by a river and its tributaries. i) Three types of river erosion are:-
☐   Headward erosion – lengthens river course ☐   Lateral erosion – widens the river bank ☐   Vertical erosion –
deepens the river bed.
ii) Describe the process of abrasion
☐   The materials carried by the river (load) is used as a tool for scouring.
☐   The load is hurled by the river water against the banks and the floor.
☐   The load being dragged smothering the river bed.

- Eddy currents rotates rock particles in hollows and widen them into pothole.
- Abrasion is responsible for wearing down the river bed and widening the banks as the river flows down stream.
(3 marks) iii) Explain the four processes in which the river
transports its load.
- Solution –This is the process in which materials that are soluble in water like soil are transported down stream. Chalk in limestone areas.
- Suspension – process where light insoluble materials like silt and mud are carried and maintained within the turbulence of flowing water.
- Traction – process of transportation where large and heavier materials are rolled/dragged along river bed e.g. logs and rocks.
- Saltation/hydraulic rifts – process whereby materials/particles such as small stones are transported downstream through a series of short hops and jumps.

Particles that are not too heavy but cannot remain suspended in water are momentarily lifted by water turbulence and at times dropped into the river bed.   2 x 4 = 8 marks b) (i) The importance of the route map.

- To help to identify the direction to follow.
- To help to prepare a work schedule.
- To identify the location of features for study.
- To estimate the distance to be covered.
- To estimate the time the field work is supposed to take.   (3 x 1 = 3 marks)
  (ii) Two features that they may have observed and studied are:
- Interlocking spurs
- V-shaped valleys
- Gorges
- Rapids
- Water falls
- Pot holes   2 marks

(iii) Two problems that they may have encountered are:
- Harsh weather changes – rainy day ☐   Attack by wild animals e.g. crocodiles ☐   Accidents in the river.
- Loss of direction.   3 x 1 =2 marks
 (iv) Any two follow up activities are:
- Discussing the findings
- Drawing diagrams
- Displaying photographs
- Read more about the topic writing field reports
- Sketching the features
- Analyzing collected data drawing conclusion
  Assessing the information collected against the hypothesis.   2 x 1 = 2 marks
8
i) Faulting is process whereby the crustal rocks or rocks of the earth crust fractures or cracks.
       Process of breaking or fracturing of the rocks of the earth crust due to compression or tension forces
                                                                              (2 marks)
                                    ii) Three types of features associated with faulting are:
- Fault scarps
- Fault steps
- Block mountains/horsts/fault blocks ☐   Tilt block   any 3 x 1 = 3 mark iii) Formation of the rift valley by tension:
 Process:- movement within the crust causes instability Layers
  of the rocks are subjected to tensional forces.
  Parallel faults – Lines of weakness develops/cracks/fissues develop/ Normal faults develops.
- Continued tensional forces results with the middle block subsides/sink.
  - Side blocks are pulled aside.
  - The middle sunken part forms the Rift valley. Step faulting may follow.

☐   The hangings sides are later smothered by the forces of denudation/erosion weathering. Any 4 x 1 = 4 marks
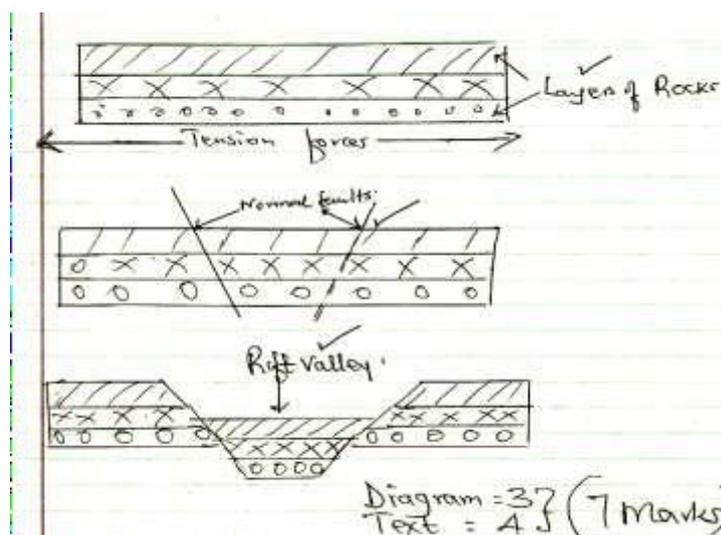
b) (i) Any two objectives of the study.
- ☐   To locate the different features
- ☐   To find out the main features associated with rift valley. ☐   Establish the land use around the area; ☐   To explain how the rift valley was formed. ii) Three importance of studying faulting through fieldwork are: ☐   It enables the students to collect first information. ☐   It helps the student to develop manipulative skills
- ☐   It enables the students to develop co-operation with each other.
- ☐   It helps the student to apply the knowledge learned in the class room.
- ☐   -It makes learning interesting
- ☐   -It makes learning real
- ☐   -It provides detailed/broader learning or in depth learning.
- ☐   - It enhances vision memory.   (3 marks) iii) The significance of faulting to human activities.
- ☐   Faulting leads to formation of features that provides beautiful sceneries which attract tourists.
- ☐   Faulting leads to formation of lakes that are important fishing grounds/tourist sites/mining sites/provide water for irrigation/domestic use/industrial use.
- ☐   Faulting leads to displacement of rocks which exposes minerals that are mined.
- ☐   Faulting may lead to formation of mountains/Horsts which attract rainfall on the wind ward side which favours agriculture/settlement forestry.
- ☐   When faulting occurs across a ridge it may provide a dip which could form a mountain pass where transport and communication liner can be constructed/may hinder development of transport.
- ☐   Subsidence of land as a result of faulting may lead to loss of life and property.
- ☐   Faulting may cause a river to change direction or disappear causing water shortage for the people downstream.
- ☐   Springs occurring at the foot of the fault scarps attracts settlements.
- ☐   Faulting creates a deep fault which are passages of steam jets which may be utilized for geo-thermo power projects.
- ☐   Rivers flowing over fault scarps may form waterfalls which may be suitable sites for Hydro-electric power production. (H.E.P).

9.
(a) (i) A rock is a substance made up of minerals or combination of mineral particles cemented together and forms the solid part of the earth‟s crust. (2 marks)
(ii) Two reasons why sedimentary rocks are widespread in the coastal plain.
- ☐   The coastal areas was once on extensive part of the continental shelf of the Indian ocean sedimentation took place on this shelf extensively.
- ☐   The shallow continental shelf also provided a conducive environment for the formation of coral rocks.
- ☐   Upon the emergence of the land from the sea, extensive areas with sedimentary rocks and corals were exposed as dry land.   (2 marks)

b) (i) Changes that occur to sedimentary rocks when they are subjected to intense heat and pressure. ☐
   New minerals are formed
- ☐ Further recrystalization of minerals occur
- ☐ Rock particles become compacted
- ☐ The physical appearance/colour changes
- ☐ The rock becomes metamorphosed.   (4 x 1 = 4 marks)

(ii) Processes through which sedimentary rocks changes into metamorphic rocks changes into metamorphic rocks.
- ☐ During the process of mountain formation pressure and heat are generated. They both modify the structure of the original rock. This is thermal dynamic metamorphism.
- ☐ Weight of overlying rocks exert pressure on the lower changing the rock structure. This is dynamic metamorphism.
- ☐ Hot gases, liquids or magma may intrude into rocks during volcanic eruptions. The heat recrystallize the rock grains changing its structure. This is thermal/contact metamorphism (metasomatism). c) Formation of coral rocks
- ☐ They are formed by tiny marine organisms called coral polyps which live in colonies in the sea.
- ☐ The polyps extract calcium from the sea water to make their shells.
- ☐ When the polyps die, their hard exo-skeletons (the shells) of calcium carbonate accumulate into a solid mass.
- ☐ Successive colonies of polyps attach themselves onto the solid mass and out one another.
- ☐ The spaces between the dead coral popyps are cemented by calcareous algae.
- ☐ The rock grows in size to become coral rocks. d) (i) Source of secondary information
- ☐ Text books/journals/periodicals/magnesium/newspapers ☐ Maps/geological maps.
- ☐ Photographs/pictures/videos/films
- ☐ Tape recorded information

(ii) Activities in the field study.
- ☐ Drawing sketches
- ☐ Observations
- ☐ Collecting of rock samples
- ☐ Making notes
- ☐ Taking photographs
- ☐ Asking/answering questions
- ☐ Studying geological maps

10. a). (i) A spring is a natural outflow of water from the rocks or underground while a well is a hole sunk into permeable rock to reach the water table. (2 marks)   (ii) Four conditions favouring formation of artesian wells.
- ☐ The acquifer must be of semi permeable materials.
- ☐ The acquifer must be exposed in an area of sufficient precipitation.
- ☐ The acquifer must lie in between two impermeable rocks for it to retain water.
- ☐ The basin must dip towards a region where the land surface is lower than it is at the exposed and of the previous formation.
- ☐ There must be a partial construction or total blockage of exit sufficient for the water that comes in higher portion of the acquifer to be replaced under pressure. (4 x 1 = 4 marks)

b) (i) A Karsts scenery is a limestone region where water action has created unique feature. (2 marks) (ii) Karsts surface features.
- ☐ Scarps
- ☐ Hills
- ☐ Dry valleys
- ☐ Gorges
- ☐ Gully/grikes
- ☐ Clints
- ☐ Swallow holes/sink holes
- ☐ Dolines
  - a. Uraras
  - b. Pole
  - c. Karsts windows

d.   Karsts bridges   (5 x 1 = 5 marks)

c) Formation of limestone pillar

☐   Limestone pillars are formed when stalagmite join stalactite.

☐   If a stalagmite forms directly below a stalactite the two features grow towards each other

☐   They eventually meet forming a continuous column that resembles a pillar. This is a limestone pillar.

Exp – 3 marks

Diag – 3 marks

Total   - 6 marks

Diagram of a Limestone Pillar
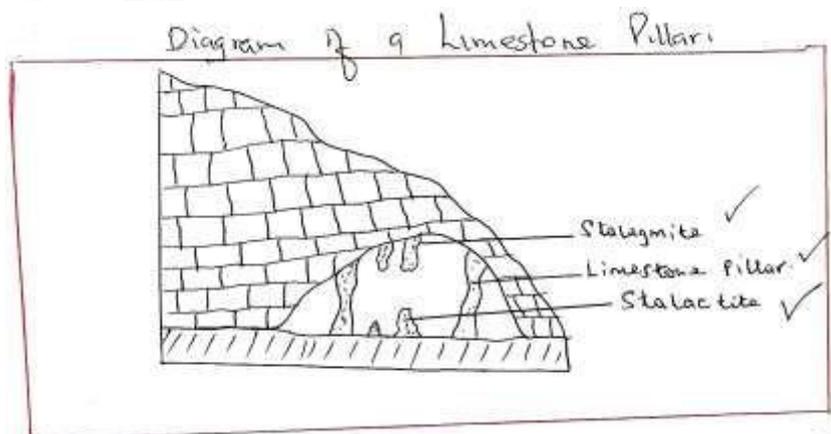
d) Significance of Karsts scenery to human economic activities.

☐   Karsts features from good tourist attractions like the caves, gorges, dry valleys who bring in foreign exchange.

☐   Collapse of doline into water table may lead to lakes in the Karst area. Solution lakes occur in poljes and provides domestic and industrial water.

☐   Karsts scenery landscape is characterized with intermittent streams or obsence of streams leading to scarcity of water supply in these areas.

☐   The limestone areas are also characterized by outcrops of bare rock, rugged rock and steep sided dry valleys with gorges which make development of infrastructure especially roads not only difficult but also expensive.

☐   Lime stone areas are very favourable for grazing purposes, particularly for sheep because the soil is thin and the surface dry.

☐   Cement used in the building industry is derived from limestone rock e.g. in Kenya cement factories found at Bamburi due to coral limestone presence.   (3 x 2 = 6 marks)

GATUNDU SOUTH FORM FOUR 2015 EVALUATION EXAM
312/2
GEOGRAPHY
PAPER II
JULY/AUGUST 2015 <u>MARKING</u>
<u>SCHEME</u>

1.

a) Define the term fisheries   (2 marks)

Fisheries refer to an area or a place where fish are reared or caught in

numbers. b) Three ways in which marine fisheries in Kenya can be conserved.

☐   Establishing of research stations to study various fish species their breeding habits.

☐   Creating awareness on the importance of fish resources and fishing grounds to reduce pollution of these grounds.

☐   The government should protect inland water resources by advising people not to interfere with the regular flow of rivers.

☐   Indiscriminate fishing should be banned to avoid depletion of fish stock in water bodies.

☐ Laws should be enacted to allow only a small number of selected fishermen to carry out the activity.

2.

a) Four factors that influence development of industries in Kenya. (4 marks)

☐ Raw materials – industries are located near sources of raw materials as bulky materials may incur high costs of transportation.

☐ Power is required to run machinery in the industries and therefore should be located near sources of power.

☐ Transport and communication is important since this is well developed in urban areas most industries are located in such areas.

☐ Some industries require regular supply of water and this requires that they be located near a river or a lake.

☐ A ready market should be taken into account especially the purchasing power of the population.

☐ Successful industrial development demands availability of both skilled and unskilled labour.

☐ Government play a major role in that they may determine the location of an industry either on economic or political reasons.

☐ Industrial investments are very expensive and require capital. A lot of money is required to purchase land or buy equipment.

☐ Industrial inertia – some industries may remain in their original locations even if the original considerations for their establishment have changed.

b) Identify three factors that favoured the location of cement processing plant in Athi River near Nairobi.

    i) There was the availability of raw materials i.e. limestone.

    ii) A ready market is provided by the dense population in the area.

    iii) A good transport net work that facilitates movement to the market.

3.

a) State three factors that favour the growth of forests on mt. Kenya. (3 marks)

☐ The cool climate enables forests to flourish.

☐ High rainfall experienced in the area enhance growth of trees.

☐ The steep nature of the forested land makes it a conducive area for forest growth.

b) Name two types of indigenous hand wood trees found on Kenyan forests. (2 marks) ☐

Elgon olive

☐   Elgon teak

☐   Meru oak

☐   Mvule

☐   Camplum 4.

a) State three main functions of rural settlements. (3 marks) ☐

Residential area for the rural population.

☐ There are educational centre – there are many schools in these areas.

☐ Religious centers are available in rural areas involving various denominations.

☐ Recreational and cultural centers are also available in rural areas.

☐ Administrative centre – there are local chiefs and sub chiefs.

b) List three factors that led to the location of Mombasa as a city and port.

☐ The site was strategic calling point for early traders to and from East Africa.

The island provided a good defensive site against external aggression.
□ The coral limestone found in the area was used for building.
□ The fland land was ideal for construction of buildings.
□ The two rivers Mwachi and Kombeni provided fresh water for the settlers.
□ The deep water at the kilindini Creek provided a well sheltered natural harbour.
□ Mombasa has a large and rich hinterland which covers Kenya Rwanda and Southern Sudan.

5. List three forms of telecommunication services in Kenya.
□ Landline/mobile phones telephone services
□ Telex services
□ Telegraphic services
□ Paging services
□ Radio communication services   (3 x 1)

SECTION B

6. Use the table below showing the number of tourist who visited Tanzania between the year 2010 to 2013.

Origin/year	2010	2011	2012	2013
KENYA	100,000	80,000	60,000	40,000
SPAIN	80,000	50,000	45,000	45,000
ITALY	70,000	40,000	35,000	30,000

   a) i) Using a scale of 1cm to represent 20,000 tourists, draw a cumulative/compound bar graph to represent this
        data.   (8 marks)
      ii) Find out the number of tourists who visited Tanzania in the year 2011.   (2 marks)
   b) State three advantages of the technique used in (a) above   (3 marks)
   c) Differentiate between a national park and a game reserve.   (4 marks)
      d) i) Explain the significance of tourism to Tanzania.   (5 marks)
      ii) Name three main tourist attractions in Kenya.   (3 marks)
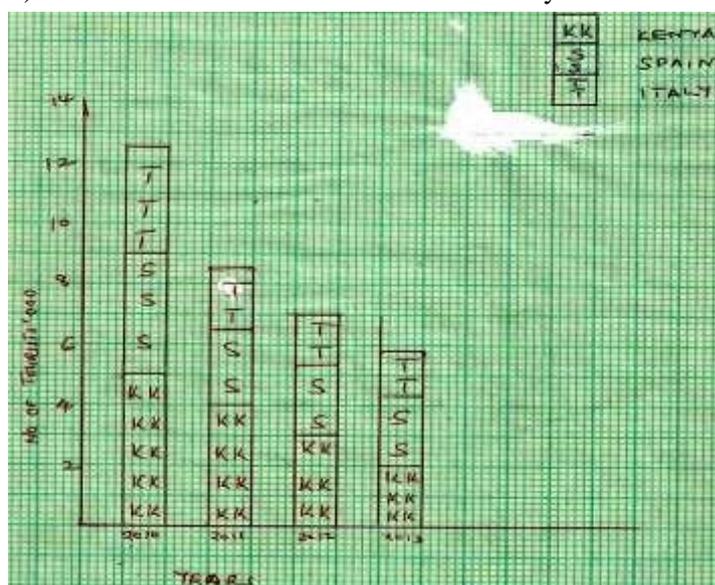
6.   a) ii) Find out the total number of tourist who visited Tanzania in the year 2011. (2 marks)
answer   80,000 + 50,000 + 40,000 = 170,000

                                = 170,000 tourist
   b) State three advantages of the technique used in (a) above.   (3 marks)

☐
  i)   It provides a clear visual impression of total values.
  ii) Easy to read and interpret the highest and the lowest totals at a glance.
  iii) The increase or decrease in the ground total values is easy to see.
   c) Differentiate between a national park and a game reserve. (4 marks)

National park	Game reserve
- Area set aside and run by the government exclusively for preservation and protection of wildlife.	- Area set aside and run by the local people and accommodate both wildlife and domestic animals.
- Grazing is not allowed.	- Grazing is allowed.
- They are large in size.	- They are small in size.
- Are located for from easy of human settlement.	- Are usually found neighbouring human settlements.

   d) (i) Explain the significance of tourism in Tanzania.   (5 marks
☐   Source of revenue
☐   Source of foreign exchange
☐   It has led to the development of infrastructure e.g. roads.
☐   Creation of employment opportunities
☐   Creation of markets for both manufactured and agricultural goods.
ii) Name three main attractions in Kenya. (3 marks)
☐ Unique sceneries e.g. Mt. Kenya.
☐   Culture of the Kenyan people.
☐   Vegetation. ☐ Wildlife
☐   Museums.
7.   a) i) State three levels of monetary trade. (3 marks)
☐   Local trade
☐   Regional trade
☐   International trade ii) Outline four factors that influence trade
☐   Differences in natural resources in the world indicate that no single region can produce all the commodities needed to satisfy its people hence the need to trade.
☐   Population affects the volume of trade transacted in different regions. A large population provide a widen market for local or foreign trade.
☐   Demand and supply outlined the kind of trade that can take place between the coutries   of the world. The more the demand the higher the supply.
☐   Nature of exports and imports which are mainly manufactured goods this may lead
☐   Adequate and efficient means of transport and communication are essential for successful trade. Poor transport and communication discourage trade.
☐   Capital – money is required by traders to start business ventures. Lack of capital hinders large scale production of commodities.
☐   Trade restrictions such as tariffs, quotas trade agreements discourage trading, high taxes reduce and discourage transactions.
☐   Tracking blocks or association are formed to promote the trade. Countries involved have better prospects of trading with one another leading to economic development of these countries.
☐   Political relationship among countries, involved may encourage or discourage trade. Warring nations do not in most cases trade together.
☐   Security leads to prosperity of a trading

□ Use of different currencies can be an obstacle of trading because of the varying rates of exchange. Some benefit more.

□ Different technological levels leads to adverse balance of trade especially with the developing countries.

(4 x 1)

b) Explain three ways in which trade is of significance to Kenyans economy. (6 marks)

□ Economic growth – trade makes goods available where there is demand. It leads to development of industries in both agricultural and manufacturing sectors.

□ Industrial growth – demand for goods stimulates industrial growth more industries are set up to satisfy increased demand.

□ Trade enables Kenya to earn foreign currency which is used in local investment and imports.

□ Kenya has developed its transport and communication through trade.

□ Source of revenue – The government earns revenue by changing sales tax on manufactured goods sold locally.

□ Trade has created employment in sectors dealing with foreign trade as well as in wholesale and retail enterprises. Trade has stimulated specialization in the production of goods. Countries specialize in areas where they can produce quality products.

□ Development of settlements – many towns owe their origin to starting of small markets.

c) (i) Outline four roles played by the common market for Eastern and Southern Africa in the economy of its members states. (4 marks)

    a) COMESA promotes social and economic integration of its member states – this has led to rapid and sustainable growth and development of the economies.

    b) It fosters good relations, peace, stability and high standards of living in member states.

    c) It has established a free trade area, a common external tariff and a customs union for members countries.

    d) Its has acted as a stepping stone towards the establishment of the African economic community. (ii) Identify four problems facing regional trading blocs in Africa. (4 marks) □ Some of the countries produce similar goods which hinders regional trade.

□ Poverty in some of the countries makes members lack the purchasing power.

□ Some member countries fail to remit annual subscriptions to the trading bloc limiting their operations.

□ There is poor transport and communication networks between the member states.

□ Civil wars among and between communities cause insecurities which affects trade.

□ Tree trade may affect local trade since some imported commodities may be cheaper than locally manufactured goods.

□ Reliance of some countries in other

□ Difference in the level of economic development makes some countries rely on others for some products. d) Explain the meaning of the following terms.

    i) Balance of trade (2 marks) – This refers to the difference in value between a country visible exports and imports.

    ii) Invisible trade (2 marks) – There are the services which can earn foreign exchange without the transfer of goods from one country to another.

8.a) (i) Name two diseases that affect sugar cane. (2 marks)

    i) Ratooming – stunting disease ii) Smut

    iii) Sugar cane mosaic ii) Name two main pests that affect sugar cane crop. (2 marks)

    i) White scales ii) White grub iii) Termite

b) Give four ways in which sugar is used. (4 marks)

□ Its used as sweetener for various foods and beverages.

□ Used in the manufacture of sweets chocolates, sprits, soft drinks and juices.

□ The brown coarse sugar is used in the manufacture of local brews.

▢

▢   Molasses is used to manufacture of ethanol, acetone and ethyl acetate ▢ The filter cake which results from filtration process is used as manure.

▢   It is used as a sweetener of syrup.

c) Give four physical conditions that favour sugar cane growing. (8 marks)

▢ Temperature: Sugar cane requires hot climate with temperature that range between 21° C and 27° C.

▢ Rainfall of between 1250mm and 2000mm well distributed throughout the year.

▢ Dry season when it is almost time for harvesting the weather should be dry and sunny.

▢ Sugar cane requires well drained soils i.e. loam, clay, sandy.

▢ Topography sugar cane requires gently sloping land to facilitate mechanization.

▢ Altitude sugar cane grows well at high altitude of upto 1600m.

d) Describe the steps involved in sugar processing after the cane is harvested (9 marks) ▢
The cane is weighed while still on the lorries and tractors.

▢ It is off loaded and put in large water tanks when it is washed.

▢ It is passed through a machine which cuts it into pieces.

▢ The pieces are then passed between rollers which clash the cane and squeeze out the juice the juice is put in a clarifier, where the fine matter is suspension and the soluble non-sugars are precipitated forming a dark coloured mud which is separated from the juice.

▢ The juice is put into boilers called evaporators where it is boiled with lime under reduced pressure until it turns into thick syrup.

☐ The syrup is then passed on a vacuum pan with very low pressure a dark brown mixture of molasses and sucrose crystals called massecuite is formed.

☐ The massecuite is then put in open tanks called crystallizers when sugar crystals grow.

☐ The massecuite is then put in centrifuges where crystals are separated from molasses. The raw and coarse sugar is brown which is further refined to give brown, white and other various grades.

9.

a) Define the term wildlife. (2 marks)- It refers to the animals and plants existing in their natural habitat.

b) Explain four physical factors that influence the distribution of wildlife in East Africa. (8 marks)

☐ Climate – most wild animals are found in hot and warm zones while few animals are found in high mountain areas e.g. mountain gorillas at the same time vegetation grows well in areas with high rainfall this attracts wide range of wild animals i.e. elephants, buffalos etc in grassland areas with low rainfall carnivorous animals are found

☐ Relief: altitude influence vegetation e.g. mountain tops attract plants i.e. Lobelia which is not found in lowland areas that face sunrays more vegetation.

☐ Rugged landscape are not suitable for wildlife.

☐ Soil: Different types of plants grow in different soils, earthworm, and burrowing animals like rodents can only live in particular types of soil, crabs and beetles are found in some soils i.e. sandy vegetation are habitat for different animals e.g. Natural forest are habitats for elephants, buffaloes etc. savannah grasslands attracts herbivores i.e.
gazelles wild beast, zebras etc.

☐ Drainage: Well drained soils support a wide variety of plants and animals some plants survive in water logged soil e.g. Papyrus some animals e.g. water snakes, crabs, water buck are found there.   (4 x 2 = 8 marks)

c) What are the problems facing wildlife in Kenya. (8 marks)

☐   Poaching where animals are killed for meat , tusks, horns illegally leading to decline in animal species. ☐ Human wildlife conflict due to high population.

☐   Encroachment of land reserved for wild animals.

☐   Fires in the forests destroy both plants and animals.

☐   Inadequate capital to maintain Maitland parcel and game reserves.

☐   Overgrazing and soil erosion as a result of increase in animal population.

☐   Environmental population e.g. sewage disposal.

☐   Over-exploitation of wildlife
    Overcrowding caused by tourist traffic leading to wildlife harassment and stress.   (4 x 2 = 8 marks) d

(i) Students of Karatu high School intend to visit a national park near their school, outline four objectives for their visit.   (4 marks)

☐   To find out the food chain system in the park.

☐   To find out the types/species of trees in the park. ☐ To find out the problems experienced in the park

☐   To identify the animal species in the park.
    (ii) Identify three methods they could use to collect the data; (3 marks)

☐   Observation

☐   Oral interview

☐   Preparing a questionnaire

☐   Secondary sources ☐ Taking photographs

10

(a)   (i) Define the term forest (2 marks)
        It‟s a continuous and extensive law covend with a closed stand of tall tree.
    (ii) Describe the characteristics of tropical hardwood forests. (8 marks)
    ☐ Some trees are evergreen and shed a few of their leaves at a time. ☐

- ⬜

  Some of the trees grow beyond forty six metres with straight trunks ⬜

  Most of the trees have large trunks with buttressed bares.

  - ⬜ The trees are very heavy with some even not floating on water

  - ⬜ The trees take a long time to mature usually between sixty five and hundred years.

(b) Explain four major factors that influence the distribution and types of forests. (8 marks)

⬜ Altitude has a great influence on temperature and rainfall. Low altitude areas have higher temperatures a while high altitude areas have lower temperature – the rate of growth slows with decrease in temperature.

Aspect – windward slopes of mountains are usually wetten and therefore forests are denser thanleeward slopes.

⬜ Precipitation – heavy precipitation throughout the year favours proper tree growth.

⬜ Temperature – for growth different plants require different amounts of warmth in areas with high temperatures and heavy rainfall plant growth is accelerated.

⬜ Soil – plants depend on soil for nutrients and anchorage. Soil extensities such as texture structure ⬜ and acidity influence plant growth

⬜ Human activities play a big role in influencing the distribution of natural forests. Agriculture leads

⬜ to depletion of forests.

c) Discuss soft wood forests in Kenya and Canada under the following sub headings.

i) Tree species(2 marks)

– In Kenya there are both the exotic and indigenous species while in Canada they are all indigenous.

ii) Marketing (2 marks

–In Kenya most of the wood products are sold locally while in Canada they are sold to USA Britain and parts of Europe.

d) Students of Gakoye High school carried out study in a local forest. What problems are they likely to experience

(3 marks)

i) Rugged steep terrain ii) Encounter with dangerous wild animals iii) Harsh weather

KIRINYAGA CENTRAL SUB-COUNTY JOINT EXAMINATION 2015
*Kenya Certificate of Secondary Education*
312/1
GEOGRAPHY
PAPER 1
JULY/AUGUST 2015

<u>**SECTION A**</u>:
*Answer **all** questions from this section in the spaces provided.*

1. (a) The diagram below shows the internal structure of the earth.   Use it to answer the question below.
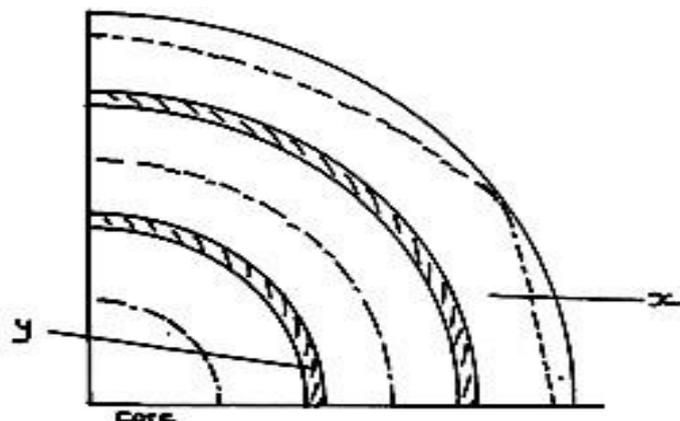
Name the parts marked **X** and **Y**.   (2 marks)
>   (b)   State **two** characteristics of the troposphere.   (2 marks)
2.   (a) Give **two** factors that may be considered when classifying the clouds.   (2 marks)
>   (b)   State **one** characteristic of Katabatic wind.   (1 mark)
3.   (a) Identify **three** processes of wind erosion in desert areas.   (3 marks)
>   (b)   State **three** factors that influence the development of karst sceneries.   (3 marks) 4. (a) What is weathering.   (2 marks)
>   (b) Describe the following weathering processes.
>
>   ☐ Exfoliation.   (3 marks) ☐ Carbonation.   (3 marks)
5.   (a) Give **two** examples of slow mass movement.   (2 marks)
>   (b) State **two** conditions that are ideal for the formation of a delta.   (2 marks)

SECTION B: MAPWORK
*Answer question **6** and any other **two** questions from this section.*
6.   Study the map of Migwani (Sheet 151/1) provided and answer the questions that follow.

(a) (i) What is the bearing of Usiani School (grid reference 951681) from the trigonometrical station (grid
>   reference 936749)   (2 marks)
>   (ii) Measure the distance in kilometers of the dry weather road D503.   (2 marks)
>   (iii) Calculate the area to the West of all weather road bound surface in kilometers. (2 marks) (b) Draw a rectangle of 14cm by 10cm to represent the area between easting 05 and 12 and northing 63 and 68.
>   (1 mark)

>   In it mark
> *   Ridge.   (1 mark)
> *   Ikoo river.   (1 mark)
> *   Dry weather road D509.   (1 mark)
>   (c) (i) Give **two** methods that have been used to represent relief in the area covered by the map. (2 marks)
>   (ii) Describe the drainage of the area covered by the map.   (6 marks)
>   (iii)   Giving evidences state **two** economic activities carried out in the area covered by the map.
>   (4 marks)
>   (iv)   Identify **three** social activities carried out in the area covered by the map.   (3 marks)
7.   (a) (i) Name **three** types of rocks according to their mode of formation.   (3 marks)

       (ii)   Mention **three** areas where sedimentary rocks are found in Kenya. (3 marks)

(b) (i)   State **four** characteristics of sedimentary rocks. (4 marks)

       (ii)   Describe the formation of mechanically formed sedimentary rocks. (5 marks)

(c) Explain **five** significance of rocks to the economy of Kenya. (10 marks)

8. (a) (i)   Differentiate between faulting and folding. (2 marks)

       (ii)   Name **two** types of folds. (2 marks)

(b) Describe **three** theories that explain the formation of Fold Mountains. (9 marks)

(c) Students from Kar School intends to conduct a field study on land forms around their school.

    (i) State **two** objectives of their study. (2 marks)

    (ii) What is the importance of a reconnaissance trip to the students? (2 marks)

    (iii)   List any **two** methods they would use to present their data. (2 marks)

(d) Explain **three** significance of Fold Mountains. (6 marks)

9. (a) (i)   Name **two** examples of man-made lakes in Kenya. (2 marks)

       (ii)   List **three** external land forming processes that leads to the formation of (3 marks)
lakes.

(b) Describe how the following lakes are formed.

    (i) Ox-bow lake. (4 marks)

    (ii) Moraine dammed lake. (3 marks)

    (iii)   Lakes formed by solution. (3 marks)

(c) State **two** reasons why some lakes are salty. (2 marks)

(d) Explain **four** economic importances of lakes. (8 marks)

10. (a) (i)   What is underground water? (2 marks)

       (ii)   Give **two** sources of underground water. (4 marks)

(b) (i)   Name **two** underground features of a karst region. (2 marks)

       (ii)   Describe how an uvala is formed. (3 marks)

(c) Explain **three** conditions necessary for the development of karst scenery. (6 marks)

(d) Explain **four** significance of underground water. (8 marks)

KIRINYAGA CENTRAL SUB-COUNTY JOINT EXAMINATION 2015
Kenya Certificate of Secondary Education
312/2
GEOGRAPHY
PAPER 2
JULY/AUGUST 2015

SECTION A:
Answer all questions from this section in the spaces provided.
1.   (a) Give **two** characteristics of horticultural farming.   (2 marks)
        (b) Name **three** main tea growing areas in the Eastern Kenya Highlands.   (3 marks)
2.   (a) What is a population pyramid?   (2 marks)
        (b) Give **three** ways on how the government of Kenya can reduce infant mortality.   (3 marks)
3.   (a) What is industrial inertia?   (2 marks)
        (b) Give **three** examples of cottage industries in Kenya.   (3 marks)
4.   (a) Apart from flooding name **two** other natural hazards experienced in Kenya. (2 marks) (b) Identify **three** ways through which water is polluted.   (3 marks)
5.   (a) Name **two** tourist attractions found in Kenya Rift Valley of Kenya.   (2 marks)
        (b) State **three** problems experienced by the Kenya Government in its effort to conserve wildlife.   (3 marks)

SECTION B:
Answer question 6 and any other two questions from this section.
6.   (a) Identify three agricultural food processing industries in Kenya.   (3 marks)
        (b) The data below shows the quantity of tea processed from various counties in the years 2010 – 2012 in ton
             Use it to answer the questions that follow.

County	2010	2011	2012
Kiambu	4600	200	300
Kericho	2000	3700	3800
Murang¨a	980	1000	200

Source: Statistical abstract.
(i) Using a scale of 1cm to rep 500 tonnes draw a comparative bar graph to represent the data to that above.
                                                                                    (8 marks)
(ii) State factors that favoured the location of oil refining industry in Mombasa.   (4 marks)
        (c) (i) Explain the significance of the industrial sector in Kenya.   (6 marks)   (ii) Explain **two** economic importances of using mobile phonesin promoting trade in Kenya. (4 marks)
7.   (a) State **three** physical conditions that favour large scale sugarcane farming in Kenya.   (3 marks)
        (b) Explain the cultivation of sugarcane from preparation of land to the harvesting stage.   (6 marks)
        (c) Explain **five** problems facing sugarcane farming in Kenya.   (10 marks)
        (d) Your class visited a sugar factory for a field study on sugar processing.
                (i)   Name **four** stages that they observed in sugar processing.   (4 marks)
                (ii)   Name **two** by-products of sugar that they may have identified.   (2 marks)
8. (a) Distinguish between transport and communication.   (2 marks)
        (b) Highlight how the following factors influence transport and communication.
        (i)   Physical factors.   (2 marks)
        (ii)   Political factors.   (2 marks)

(iii)	Economic factors.	(2 marks)
(iv)	Technology.	(2 marks)

(c) Name **five** great lakes that make up the St. Lawrence Sea Way. (5 marks)

(d) What is a road by-pass. (1 mark)

(e) Give **five** roles of transport and communication in Africa. (5 marks)

9. (a) Define the following terms:-

      (i)   Regional trade. (1 mark)

      (ii)   Bilateral trade. (1 mark)

(b) State **three** reasons for trade barrier. (3 marks)

(c) Explain **three** measures that can be used to correct unfavourable balance of trade. (6 marks)

(d) (i)   Give **three** factors that promote internal trade. (3 marks)

      (ii)   State **four** problems facing internal trade in Kenya. (4 marks)

(e) (i)   Name **one** trading bloc in Africa of which Kenya is a member. (1 mark)

      (ii)   Explain **three** benefits of trading blocs to the economies of African (6 marks)
countries.

10. (a) What is a settlement. (2 marks)

(b) Explain **four** physical factors that influence settlements. (8 marks)

(c) State **four** factors that led to the development of Kisumu as a town. (4 marks)

(d) Name **three** functions of Kisumu town. (3 marks)

(e) Explain **four** ways in which urbanization benefits a country. (8 marks)

KIRINYAGA CENTRAL SUB-COUNTY JOINT EXAMINATIONS 2015
312/1
GEOGRAPHY PAPER 1
MARKING SCHEME
SECTION A

1.
(a) <u>Parts marked X and Y.</u>
   X – Sima / lower crust / oceanic crust / Lithosphere.
   Y – Gutenberg discontinuity.
(b) <u>Two characteristics of troposphere.</u>
   Extend from the earth"s surface to about 18kms from the earth"s surface.

☐ The temperature decreases with rise in altitude / Temperature decreases at a rate of 6^0C for every 1km rise / 0.6^0 per 100m.
☐ Atmospheric pressure falls with increase in height.
☐ Speed of wind increases with increase in height.
☐ Contains 90% of all atmospheric water vapours.
☐ Contains 75% of the total gaseous mass of the atmosphere and in constant motion.   (any 2x1 = 2mks) 2.
(a) <u>Two factors that may be considered when classifying clouds.</u>
☐ Cloud height in the atmosphere.
☐ Colour of the clouds.
☐ Whether they yield rainfall.
☐ According to their appearance.
☐ According to their shape / form.   (any 2x1 = 3mks)
(b) <u>One characteristic of Katabotic wind.</u>
☐ It is cold and dense.
☐ It blows at night down a mountain slope.
☐ It is a gentle wind.
☐ Leads to formation of fog / mist in valleys in the early morning.
☐ Causes dry conditions.   (1 x 1 = 1mk)
3.
(a) <u>Three processes of wind erosion in the desert area.</u>
☐ Wind abrasion
☐ Wind attrition
☐ Wind deflation   (3 x 1 = 3mks)
(c) <u>Three factors that influence the development of Karst scenery.</u>
☐ The surface rock and rock beneath should be thick limestone / dolomite / chalk to allow water to penetrate through the rock and react with it.
☐ The rock / limestone / dolomite / chalk should be hard and well jointed to allow water to percolate.
☐ The climate should be hot and humid to increase the rate of carbonation / chemical weathering and to provide the moisture needed.
☐ The water table should be deep below the surface to allow the rocks above to form conspicuous features.
     (3 x 1 = 3mks)
4.
(a) <u>What is weathering?</u>
   It is the breaking down / disintegration and decay of solid rocks at or near the earth"s surface in situ (without movement).
      It is the mechanical breakdown or chemical decay of rocks in situ.   (2 x 1 = 2mks)
(b) <u>Describe the following weather processes. Exfoliation:</u>
☐ During hot season / day, the mass of rock is exposed to a lot of heating.
☐ The surface of the rock expands while the inner layer remains cool.
☐ During the cool season / night the surface of the rock contracts.
☐ The process when repeated causes stress on the top layer of the rock which develops cracks.

- ☐ Eventually it breaks along the cracks and peels off.
- ☐ This process is called exfoliation and forms exfoliation dome.   *6 max 3 = 3mks*
  Carbonation
- ☐ Rainwater dissolves some quantities of carbondioxide in atmosphere and forms a weak carbonic acid.
- ☐ Rainwater then comes into contact with rocks with calcium carbonate / limestone / dolomite / chalk and reacts.
- ☐ The rock is dissolved as calcium bicarbonate is formed, and the rock crumbles as it disintegrate.
- ☐ This is the process known as carbonation.   *6 max 3 = 3mks*

5.

(a) Two examples of slow mass movement.
- ☐ Soil creep
- ☐ Talus creep / scree creep
- ☐ Rock creep
- ☐ Solifluction   (any 2x1 = 2mks)

(b) Two conditions that are ideal for the formation of a delta. ☐
Presence of a large load of sediments.
- ☐ Absence of obstacles / swamps in the river"s course that filter sediments from the river thereby reducing the quantity of the load.
- ☐ Low speed / reduce gradient at the point where the river joins the sea or lake.
- ☐ Calm sea / lake / weak tidal waves to allow materials being deposited to accumulate.   (any 2x1 = 2mks)

SECTION B

6. MAP WORK

a. (i) Bearing of Usiani School grid reference 951681 from the trigonometrical station at grid reference 935747.
166^0 / $S14^0E \pm 1^0$ = $(165^0 – 167^0)$ (1 x 2 = 2mks)

  i. Distance in kilometers of the dry weather road D 503
  $15.5km \pm 0.5$ = $(15km – 16km)$

  ii. Area to the West of all weather bound surface in kilometers.
Full squares	=	4 +
Half squares	= $\dfrac{18}{2}$ =	$\dfrac{9}{13km^2}$

b.
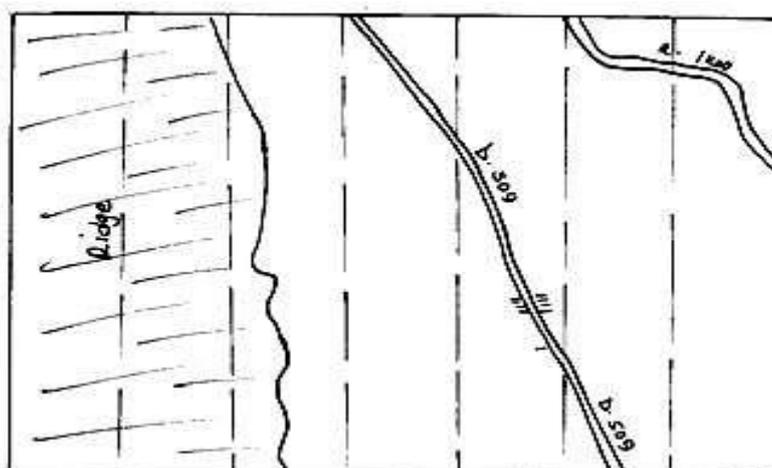
                                                                      - Sq   -
  (1mk)
  - Ridge   - (1mk)
  - Ikoo river   - (1mk)
  - Dry weather road   - (1mk)
          Total   (4mks)

c. (i) <u>Two methods that have been used to represent relief in the area covered by the map.</u> ☐
     Use of contours
☐ Use of trigonometrical station – sq. 9374
☐ Rock drawing – sq 0382   (2 x 1 = 2mks) i.   <u>Drainage of</u>
<u>the area covered by the map.</u>
☐ Most of the rivers are permanent.
☐ There are very many streams that dissect the area covered by the map.
☐ River Ikoo forms dendritic drainage pattern.
☐ River Ikoo is the main river and flows from North West to the South East.
☐ Rivers in the North West flow towards the North and North Western of the area covered by the map.
☐ River Munyuin flows from the ridges in the North East and flows eastwards and then South East.
☐ Some rivers in the South West of the area covered by the map flow towards West.
☐ River Vinda forms dendritic pattern and flows towards the south of the area covered by the map.
     (6x1 = 6mks) ii. <u>Two economic activities carried out in the area covered by the map giving</u>
<u>evidences.</u>
☐ Trading – evidence; presence of shops in Mutito market.
☐ Transportation and communication – post office, roads like D507, D509 and all weather road bound surface in the North West, water pipeline.   (2 x 1 = 2mks)
iii. <u>Three social activities carried out in the area covered by the map.</u>
☐ Health care – Health centre near Mutito market.
☐ Learning – Schools near Gwani market.
☐ Worshipping – near Makengani
☐ Rehabilitation – court house
☐ Sporting – rest house

7.
(a) (i) <u>Three types of rocks arroding tot heir mode of formation.</u>
☐ Igneous rocks
☐ Sedimentary rocks
☐ Metamorphic rocks.   (3 x 1 = 3mks)
(ii) <u>Three regions where sedimentary rocks are found in Kenya.</u>
☐ Kilifi
☐ Kwale
☐ Malindi
☐ Thika
☐ Athi River zone
☐ Lebatin plains
☐ Duduchca plains (any other)   (3 x 1 = 3mks)

(b) (i) <u>Characteristics of sedimentary rocks</u> ☐   Are formed from sediments.
☐ Are layered or stratified. ☐   Are non-crystalline ☐   Contain fossils.
☐ Have bedding plane / plane of stratification.   (4 x 1 = 4mks)
(ii) <u>The formation of mechanically formed sedimentary rocks.</u>
☐ They are formed from previously existing rocks.
☐ Particles are derived from pre-existing rocks through the process of weathering.
☐ They are transported by either wind, water or ice.
☐ They are deposited in layers according to their sizes with large debris deposited first and fine debris last.
☐ Compaction due to pressure is applied.   (5 x 1 = 5mks)
(c) <u>Significance of rocks to the economy of Kenya.</u>
☐ Some rocks contain mineral salts which is consumed by both human beings and animals.
☐ Rocks are used for building and construction.
☐ Some rocks attract tourists earning the country foreign exchange.

- Rock, weather down to form soils which support agricultural activity.
- Some of the rocks yield minerals which are exploited and bring income to the country.   (any 5 x 2 = 10mks) 8.

(a) (i) <u>Differences between faulting and folding.</u>

- Faulting is the cracking or fracturing of the rocks of the earth"s crust due to earth movement.
- Folding is the bending of the rocks of the earth"s crust due to earth movement.   (2 x 1 = 2mks)   (ii) <u>Two types of folds</u>

- Simple symmetrical fold
- Assymetrical fold
- Overfold
- Isoclinals fold
- Recumbent fold
- Nappe or overthrust fold.   (any 2x1 = 2mks)

(b) <u>Three theories that explain the formation of Fold Mountains.</u>

  a. <u>The contraction Theory</u>

- After berth formation surface rocks cooled faster and contracted faster than those of the interior.
- As the interior continued to cool the surface rocks wrinkled to fit on the contracting interior leading to Fold Mountains.   (1 x 1 = 1mk) b.

  <u>The Convection Theory</u>

- Conventional currents within the molten rock in the mantle move in circular motions towardsthe crust.
- These currents exerts a friction drag with the sima rock causing crustal rocks to move horizontally resulting into the formation of Fold Mountains.   (1 x 1 = 1mk) c. <u>Plate Tectonic Theory</u>

- When an oceanic plate meets a continental plate, the dense oceanic plate sinks beneath the higher continental one.
- The higher continental plate due to compression crumbles to form Fold Mountains.

  NB: Mention of a theory earns 1m.   (max. 3mks)

(c) (i) <u>Any objects the students can set.</u>

- To find out the land forms around the school.
- To establish the processes involved in land formation.
- To determine the influence of the land forms on the human activities.

  (ii) <u>Importance of a reconnaissance trip to the students.</u>

- Familiarizes themselves to the area of the study.
- It introduces them to the authorities and respondents of the area of study.
- It helps them to identify and decide on methods and tools to use in collecting information.
- Helps to determine suitability of the area of the study.
- Helps to identify any problems they are likely to encounter during the study.   (max. 2mks)   (iii) <u>Two methods they would use to present their data.</u>

- Drawing graphs and charts.
- Drawing sketch maps and diagrams.
- Displaying the completed questionnaire.
- Giving a lecture.
- Writing a report.   (any other relevant method)   (max. 2mks)

(d) <u>Significance of Fold Mountains.</u>

- On the wind ward side the area receives heavy rainfall that supports the growth of forests and support agricultural activities.
- Fold Mountains from beautiful sceneries that attract tourists earning the country income and create employment.
- Fold Mountains acts as defense barriers during wars.
- Forests on Fold Mountains are habitat of animals, birds and plants.
- On the Leeward side the Fold Mountains brings about dry effect discouraging settlement and agriculture.
- On the foots of Fold Mountains they form fertile soils for Agriculture leading to increase food security.
- Fold Mountain areas have rugged terrain making it difficult and expensive to construct and develop road and communication network.

☐ Fold Mountains form catchment areas for rivers which provide water for domestic and industrial use.

(any 3x2 = 6mks)

9.

(a) <u>Two examples of man-made lakes in Kenya.</u>

☐ Lake Masinga

☐ Lake Kindaruma

☐ Lake Gitaru

☐ Lake Kaburu

☐ Lake Kiambere. (max. 3mks)

(b) <u>How the following lakes are formed.</u>

    a. <u>Ox-bow lake</u>

    ☐ Forms at the mature stage of a river.

    ☐ River develops pronounced meanders due to fast deposition.

    ☐ Deposited material blocks the river.

    ☐ Old channel forms a crescent shaped lake (ox-bow) separated from the new channel by a dry land.

(max. 4mks) b.

<u>Moraine dammed lake</u>

    ☐ The glacier deposits terminal moraine at some point across the widened valley.

    ☐ As the glacier melts and retreats, the melt water accumulates behind the terminal moraine to form a moraine dammed lake.

    ☐ Ice erodes and widens valleys to form glacial troughs. (max. 3mks) c. <u>Lakes formed by solution.</u>

    ☐ Formed in limestone or chalk regions.

    ☐ Earth crust dissolves depending on the level of water table.

    ☐ This leads to formation of sunk holes.

    ☐ The sunk holes are covered with water to form a solution lake. (max. 3mks)

(c) <u>Two reasons why some lakes are salty.</u>

☐ Some of them lack fresh water rivers emptying into them.

☐ Some are fed by rivers which flow over rocks with high salt content.

☐ Some of the lakes are underlain with rocks containing a lot of mineral salts.

☐ Some lakes are situated in areas with high temperatures thus high evaporation rates leading to concentration and accumulation of dissolved mineral salts.

☐ Some lakes lack outlets to drain away some of the salts in them leading to accumulation of salts.(max. 2mks) (d) <u>Explain the positive significance of lakes.</u>

☐ Some lakes form major inland fishing grounds.

☐ Lakes supply water for hydro-electric power production.

☐ Some fresh water lakes form sources of water for domestic and industrial purposes.

☐ Lake water is used for migration.

☐ Lakes provide major transport routes.

☐ Lakes form sources of rivers.

☐ Some lakes are rich in minerals deposited in them.

☐ Lakes provide good scenery for tourist attractions.

☐ Sand deposited in lakes is scooped and used as building material.

☐ Some lakes are used for recreational purposes.

☐ Lakes modify the climate of the surrounding areas through the land and sea breeze. (max. 8mks) 10.

(a) (i) Underground water is rain water which sinks into the ground through permeable rocks, joints and faults.

    (ii) <u>Origin of underground water.</u>

☐ Part of rain water which runs off to form or join streams and into the oceans and lakes.

☐ When snow melts part of this water runs off into oceans and lakes and the other remains andpercolates into the ground/

    ☐ Lake water percolates into the earth to add to the underground water already existing.

☐ Magnetic water which get trapped into the rocks under the ground adds to already existingunderground water.

(max. 4mks)

(b) (i) <u>List two underground features of a karst region</u>.

☐ Caves

☐ Stalactites

☐ Stalagmites

☐ Underground rivers   (max. 2mks)

(ii) <u>How an uvala is formed.</u>

☐ Formed from continued solution which enlarges the shallow holes on the karst surface.

☐ Continued solution enlarges the holes to form larger holes dolines.

☐ Dolines coalesce or collapse to form a bigger hole the Uvala.

(c) <u>Conditions necessary for the Development of Karst scenery.</u>

☐ There should be presence of hard well jointed rocks to ensure permeability to allow the acidic water to percolate.

☐ Hot and humid climate with abundant rainfall to increase the rate of solution.

☐ The water table should be far much below the surface to allow water to move down through the rock.

                                                                        (max. 6mks)

(d) <u>Significance of underground water</u>

☐ Provide sites for settlement where there are springs which provide water.

☐ Underground water forms wells which provide water for irrigation in the dry areas.

☐ Underground water forms springs which are major sources of water for domestic and industrial use.

☐ Underground water form springs which are sources of various rivers.

☐ In volcanic areas underground water is heated to form hot springs or geysers which form tourist attractions.

☐ Hot springs deposit minerals in form of salt particles which are useful to man.

☐ Underground streams (effluent and influence streams) help in keeping some lakes fresh.   (4x2 = 8mks)

KIRINYAGA CENTRAL SUB-COUNTY JOINT EXAMINATIONS 2015
312/2
GEOGRAPHY PAPER 2
MARKING SCHEME

1. (a) <u>Two characteristics of Horticultural farming.</u>

☐   Farms are small except for a few which are extensive.

☐   Land is intensively farmed to reap maximum.

☐   Advanced scientific techniques of crop production are used to ensure maximum yields.

☐   It is labour intensive.

☐   Continous application of manure / fertilizer is done.

☐   Farms are located near reliable transport routes.

☐   Requires a lot of capital.   (2x1 = 2mks)

(b) <u>Three main tea growing areas in the Eastern Kenya Highlands.</u>

☐   Nyambene Hills ☐ Nyeri ☐ Murang˚a

☐   Kiambu

☐   Thika

☐   Maragua

☐   Kirinyaga

☐   Embu   (3 x 1 = 3mks)

2. (a) Population pyramid is a graphical representation of population in terms of sex (gender) and age as it shows proportion of males to females in each age group.

(b) Three ways on how the government of Kenya can reduce infant mortality.

☐ Immunization of infants.
☐ Good nutrition for expectant mothers.
☐ Provision of good health services.
☐ Provision of prenatal and antenatal care.
☐ Provide post natal education to mothers.   (3 x 1 = 3mks)

3. (a) Industrial inertia is the ability of the industry to maintain activities in a place even when the factors / reasons for its establishment no longer exist.

(b) Three examples of cottage industries in Kenya.

☐ Pot making
☐ Basket weaving
☐ Wood carving
☐ Scrap metal work
☐ Boat making   (3x1 = 3mks)

4. (a) Two other natural hazards experienced in Kenya apart from Flooding.

☐ Diseases and pests
☐ Drought
☐ Lightening
☐ Earthquakes
☐ Windstorms

(b) Three ways through which water is polluted. ☐ Disposal of domestic waste into water bodies

☐ By natural causes e.g. soil erosion / terrestrial dust.
☐ Abuse of water bodies by human beings e.g. washing clothes, bathing and animals.
☐ Discharge of agricultural chemicals into rivers and lakes by rain water.

5. (a) Two tourist attractions found in the Rift Valley of Kenya.

☐ Lakes e.g. Nakuru, Baringo, Naivasha. ☐ Flamingoes / birds.
☐ People‟s culture.
☐ Mining sites e.g. Kariandusi.
☐ Nakuru National Park.
☐ Hotsprings / Geysers/ Fumerals / Geothermal.

(b) Three problems experienced by the Kenya government in its effort to conserve wildlife.

☐ Illegal hunting / poaching of wild game threatens the conservation efforts.
☐ Overstocking of some wild animals leads to destruction of natural environment through overgrazing.
☐ Fire outbreak destroy wildlife.
☐ Pollution of environment leads to death of wild.
☐ High cost of fencing the parks.
☐ Frequent drought in some game parks leads to loss of animals through starvation to death.

SECTION B

6. (a) Three agricultural food processing industries in Kenya.

☐ Tea processing
☐ Coffee processing
☐ Sugar refining
☐ Grain milling
☐ Meat processing

- Dairy product
- Brewing and soft drinks
- Fruit and vegetable canning
- Cooking fat / oil refining
- Confectionaries   (3mks)

(b) (i) A comparative Bar Graph representing quantity of tea processed from various countries in the years 2010 – 2012.
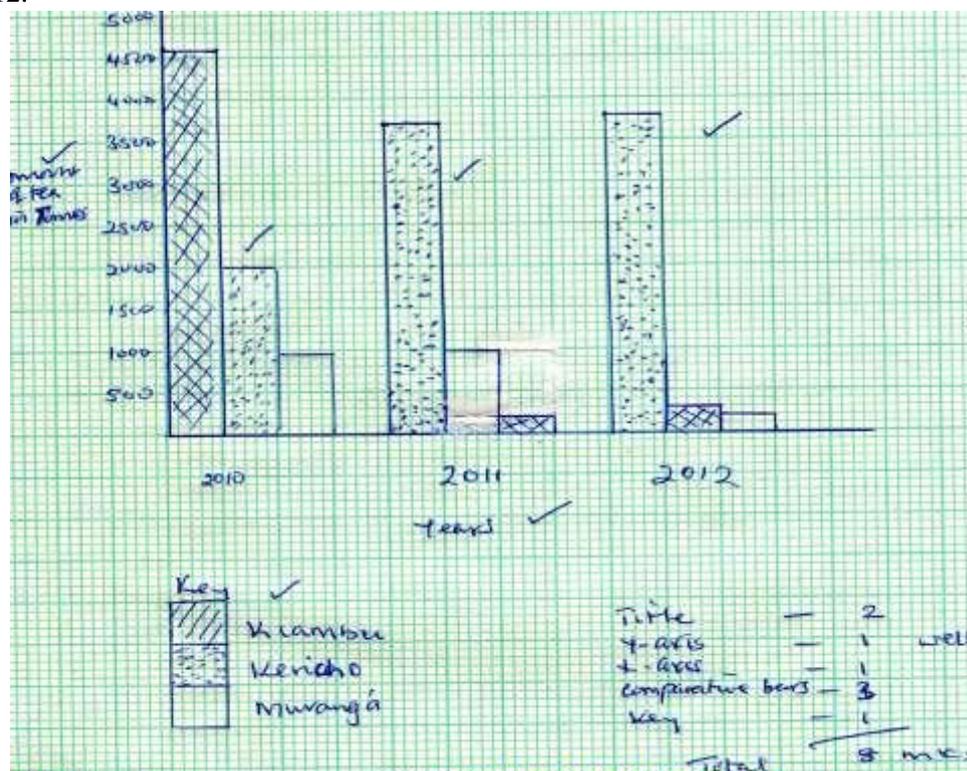
(ii) Factors that favoured the location of oil refining industry in Mombasa.

- Mombasa has a large water supply from the Indian Ocean which is needed for refining as well as waste disposal.
- Easier to transport refined oil as refining reduces the transport cost.
- The land is flat making it best suited for oil refinery.
- Refined oil products can be easily transported inland by pipeline where market is ready.
- Availability of huge and special dock for handling huge tankers, which are used to transport oil.

                                                                       (4x1 = 4mks)

(c) Significance of the Industrial Sector in Kenya.

- Provision of employment opportunities raising the living standards.
- Led to the growth of towns by encouraging settlement.
- Earns and saves the country foreign exchange through exportation of manufactured goods and reducing manufactured goods imported.
- Diversification of the economy.
- Fostered good international relations.
- Improved balance of trade.   (3x2 = 6mks)

(d) Two economic importance of using mobile phones in promoting trade in Kenya.

- Facilitates faster business transactions due to fast means of transport hence increasing volume of trade.
- Through M-pesa and M-kesho it has facilitated money transfer for business hence increasing trade transactions and investment.

☐ It has created employment which improves the living standards of the people.

☐ The company pays taxes which are used to improve other sectors of the economy.

7.

(a) (i) <u>Physical conditions that favour large scale sugarcane farming in Kenya.</u>

☐ Well drained fertile soils.

☐ Gently sloping undulating landscape.

☐ High rainfall 1000mm – 1500mm well distributed throughout the year.

☐ Moderate to high temperature ranging from $20^0C – 28^0C$.   (3x1 = 3mks)

(b) <u>Cultivation of Sugarcane from the preparation of land to the harvesting stage.</u>

☐ Land is cleared off its natural vegetation and ploughed using either tractors or oxen drawn plough.

☐ Hallowing is done to loosen the large humps of soil.

☐ Shallow furrows are dug at intervals of 1.2m to 1.8m apart and cuttings planted in the furrows.

☐ Weeding is done regularly, top dressing done and herbicides applied.

☐ At 18 months the cane is ready where it is cut using pangas and the harvested cane loaded intolorries for transportation to the factor.   (check for the flow 1 x 6)

(c) <u>Problems facing sugarcane farming in Kenya.</u>

☐ Pests such as termites and diseases e.g. stunting diseases leading to low yields which eventually leads to low income for the farmers.

☐ Occurrence of accidental fires which destroys the cane resulting into heavy losses to the farmers.

☐ Unfair competition from cheap imported sugar flooding the markets. This leads to delay in payment to the farmers.

☐ Delayed harvesting reducing the quality and tonnage of the cane thus reducing their income.

☐ Poor roads leading to delayed delivery of care to the factory lowering the quality and consequently profits to farmers.

☐ Prolonged droughts destroying the crops leading to heavy losses.

☐ High cost of farm inputs reducing the farmers profit margin.

☐ Mismanagement of factories and cooperatives leading to delayed payments which affects the farmers morale to work harder.   (any 5x2 = 10mks)

(d) (i) <u>Stages of sugarcane processing.</u>

   ☐ Chopping of the cane washing.   - Drying

   ☐ Crushing of the cane   - Weighing of sugar

   ☐ Boiling   - Packing/bagging

   ☐ Filtering   - Breaching

   ☐ Grading   (any 4x1 = 4mks)

   (ii) <u>Names of by-products of sugar that they identified.</u>

   ☐ Molasses

   ☐ Bogasse

   ☐ Wax

   ☐ Aconitic acid

   ☐ Filter coke

   ☐ Filter mud

8. (a) <u>Distinguish Between Transport and Communication.</u>

☐ Transport is the physical movement of people or goods from one place to another while communication is the process of transferring information between two or more people through different means.

(Any other appropriate definition – 2x1 = 2mks)

(b) <u>How the following factors influence transport and communication.</u>

   (i) <u>Physical factors</u>

      Relief – steep slopes and rugged terrains discourage construction of road and common networks.

     Climate – Areas that receive heavy rainfall makes it difficult for construction of rail and road networks.

(ii) Political factors
- Favourable government policies
- Revenue allocation by the government to the sector.
- Political goodwill especially where facilities are shared.

(iii) Economic factors
- Economically active areas are well developed as compared to less economically active areas.

(i) Technology
- Technology level determines the type and quality of roads and communication. (4x2 = 8mks)

(c) (i) Five lakes that make up St. Lawrence Seaway.
- Superior
- Michigan
- Huron
- Erie
- Ontorio (5x1 = 5mks)

(ii) Hurdles that necessitated construction of St. Lawrence Seaway.
- Presence of rapids and waterfalls in he waterway.
- Shallow and narrow sections along the water way.
- Blocked navigation during winter as water froze.
- Different levels between the lakes with some areas shallower than others. (4x1 = 4mks)

(d) A Road By-pass is a road / highway which avoid a town or residential areas to avoid traffic jam. (1 x 1 = 1mk)

(e) Roles of transport and communication in Africa.
- Opens up large areas creating large markets for goods and services.
- Creates employment opportunities.
- Promotes tourism.
- Helps in exploitation of natural resources.
- Promotes regional cooperation and specialization.
- Promotes urbanization.
- Adds value to goods and services.
- Earns the country revenue through taxes.(add any other correctly stated) (5x1 = 5mks)

9. (a) (i)
- Regional trade is the trade carried out within a given economic region.
- t is external trade between countries that are confined with a certain established economic region. (1 x 1 = 1mk)

(ii) Bilateral trade is the exchange of goods and services between two countries. (1 x 1 = 1mk)

(b) Reasons for trade barrier.
- Protect domestic industries.
- Protect infant industries.
- Control price fluctuation.
- Raise government revenue through taxes.
- A measure to develop substitution industries.
- To control damping.

(c) Measures to correct unfavourable balance of trade.
- Establish substitution industries to reduce importation of commodities.
- Develop alternative sources of energy of solar energy to reduce expenditure on oil importation.
- Encourage local assembling of machines since importation of parts is cheaper.
- Finding new markets for exports to avoid overdependence on a few trading partners.
- Diversify exports.

    ☐ Encourage use of appropriate technology that does not require heavy machinery.

    ☐ Increase invisible trade e.g. shipping, tourism.

    ☐ Restricting importation of luxury items through increased taxes.   (3x2 = 6mks plus any other well stated) (d)

(i) <u>Factors that promote International Trade in Kenya.</u>

    ☐ Increased accessibility / improved transport and communication.

    ☐ Use of a common national language.

    ☐ Increased population size / increased demand.

    ☐ Increased embracement of entrepreneurial culture.

    ☐ Diversified production in different parts of the country.

    ☐ Increased capital investment.   (3x1 = 3mks)

(ii) <u>Problems facing internal trade in Kenya.</u>

    ☐ Poor infrastructure

    ☐ Smuggling of goods leading to unfair competition

    ☐ Insecurity in some trading goods leading to unfair competition.

    ☐ Insecurity in some trading areas.

    ☐ High tariffs from government.

    ☐ Scarcity of some goods especially those affected by weather conditions like drought.

    ☐ Inadequate capital.   (3x1 = 3mks)

(e) (i) East African Community (EAC) Common Market for Central and Southern Africa (COMESA)

      (ii) <u>Benefits of trading blocs to the African economies</u>

    ☐ Improved transport and communication between member countries.

    ☐ Eliminated taxes on goods produced within member countries making them cheaper.

    ☐ Increased trading leading to improved living standards. ☐ Establishment of common banks ending developments.

    ☐ Industrialization from increased use of raw materials.

    ☐ Establishment and growth of urban centres.

10.

(a) Settlement is a created, distinguishable and recognizable unit of space where a group of people live together either temporarily or permanently.

(b) <u>Physical factors that influence settlements.</u>

☐ Topography - Highland areas of gentle slopes attract settlement due to availability of rainfall.

☐ Steep slopes and mountainous areas are cold for people to settle and grow crops.

☐ Drainage - Areas with rivers or springs with clean water attract settlements while poorly drained areas discourage settlement.

☐ Temperature – Moderate temperature attracts settlements while low and high temperatures discourage settlements.

☐ Soils – well drained fertile soils attract settlements while areas of poor soils are least settled.

☐ Aspect – in mountainous areas, people often prefer the warm, sunny south – facing slopes in the northern hemisphere on the north-facing slope.   (2 x 4 = 8mks)

(c) <u>Factors that led to the development of Kisumu as a town.</u>

    ☐   High population from the surrounding areas providing labour.

    ☐   Presence of Asians and Indians who settled in the area.

    ☐   Readily available water from L. Victoria for domestic and industrial use.

    ☐   Well developed road linkage to surrounding areas.

    ☐   Rich agricultural hinterland that provide food and industrial raw materials.

    ☐   Administrative function i.e. a regional headquarter for the colonial government.

    ☐   Historical factors where it acted as the terminus of the Kenya-Uganda Railway.   (4x1 = 4mks) (d) <u>Functions of Kisumu town</u>

    ☐   Port town

    ☐   Industrial centre

- ☐ Administrative centre
- ☐ Religious centre
- ☐ Commercial centre
- ☐ Agricultural collecting centre
- ☐ Communication centre (3x1 = 3mks)

(e) Benefits of urbanization

- ☐ Development of infrastructure within the urban area and surrounding rural areas.
- ☐ Provides market for agricultural and industrial goods produced in the country.
- ☐ Encourages national unity.
- ☐ Creates employment opportunities.
- ☐ Raises standards of living of the people/
- ☐ Attracts large population that provides labour and market.

KAHURO/KIHARU DISTRICT JOINT EXAMINATION – 2015
Kenya Certificate of Secondary Education
312/1
GEOGRAPHY
PAPER 1
JULY/AUGUST 2015
SECTION A:
*Answer **all** questions from this section.*

1. (a) Name **two** layers of discontinuity that are part of the interior structure of the earth. (2 marks)
   (b) State **three** characteristics of the outer core in the interior structure of the earth. (3 marks)
2. (a) What is a land breeze? (2 marks)
   (b) Give **three** ways in which sea breezes influence the climate of adjacent lands. (3 marks) 3. (a) Name the types of grasslands found in the following countries:- (2 marks) (i) Canada.
       (ii) Russia
   (b) State **three** ways in which climate has influenced the desert vegetation. (3 marks)
4. (a) What is a lake? (2 marks)
   (b) Give **three** reasons how water weeds have affected lakes in Kenya. (3 marks)
5. (a) Name **two** types of ice masses found on mountains in East Africa. (2 marks)
   (b) Give **three** characteristics of a pyramidal peak. (3 marks)

SECTION B:
*Answer question **6** and any other **two** questions from this section.*

6. Study the map of Migwani 1:50,000, sheet 151/1 provided to answer the questions that follow
   (a) (i) Identify **two** human made features in the grid square 9274. (2 marks)
       (ii) What is the bearing of the Air Photo Principal point at grid square 9162 from the Air Photo Principal point at grid square 9167. (2 marks)
       (iii) Give **three** types of vegetation in the area covered by the map. (3 marks)
   (c) Reduce the area between eastings 00 and 10, and northings 70 and 80 by half. (1 mark)   i) On it mark and name the following:
   ☐ Dry weather road
   D507. ☐ River Ikoo
   ☐ Mboni dam.
   ☐ Ikoo shops (4 marks) (ii) What is the scale of the reduced map? (2 marks)
   (d) Citing evidence from the map identify **five** social services offered in Mutitu (Ndooa) town in the South Eastern area. (5 marks)
   (e) Describe the drainage of the area covered by the map. (6 marks)
7. (a) (i) Name **three** types of faults. (3 marks)

       (ii)   Apart from tensional forces explain two processes that may cause faulting.   (4 marks)

    (b) With the arid of well labeled diagrams, describe how a rift valley is formed by tensional forces.   (8 marks) (c) State **three** positive effects of faulting.
    (3 marks)

    (d) Your are planning to carry out a field study of an area affected by faulting.
       (i)   State **four** reasons why it is important to have a pre-visit of the area.   (4 marks)
       (ii)   Give **three** disadvantages of direct observation in such an area.   (3 marks)

8. (a) What is weathering?   (2 marks)
    (b) Give **five** processes involved in physical weathering.   (5 marks)
    (c) (i)   Apart from plants, give **four** factors that influence the rate of weathering.   (4 marks)
       (ii)   Explain **three** ways in which plants cause weathering.   (6 marks)
    (d) Explain **four** effects of weathering.   (8 marks)

9. (a) (i)   Differentiate between a watershed and a catchments area.   (2 marks)
       (ii)   State **four** conditions necessary for the formation of an Ox-bow Lake.   (4 marks)
    (b) Describe **four** ways in which a river transports its load.   (8 marks)
    (c) Explain **three** negative effects of rivers to the human environment.   (6 marks)
    (d) State **three** characteristics of youthful stage of a river.   (3 marks)
    (e) Name **two** features resulting from river rejuvenation.   (2 marks)

10. (a) (i)   Apart from limestone pillar, give **three** other underground features in limestone area.   (3 marks)
       (ii)   Describe how a limestone pillar is formed.   (6 marks)
    (b) (i) State **four** factors which affect the occurrence of underground water.   (4 marks)
       (ii)   Give **three** ways in which springs may occur.   (3 marks)
    (c) You are supposed to carry out a field study of an area eroded by water.
       (i)   Give **four** reasons why you need a map of the area of study.   (4 marks)
       (ii)   Name **two** erosional features you are likely to identify during the field study.   (2 marks)
       (iii)   State **three** recommendations that you would make from your study to assist the local community to rehabilitate the eroded area.   (3 marks)

KAHURO/KIHARU DISTRICT JOINT EXAMINATION – 2015
Kenya Certificate of Secondary Education
312/2
GEOGRAPHY
PAPER 2
JULY/AUGUST 2015
TIME: 2¾ HOURS

    SECTION A:
   *Answer all questions from this section.*

1. (a) State **two** advantages of using solar energy.   (2 marks)
    (b) Identify **two** non-renewable sources of energy used in Kenya.   (2 marks)

2. (a) Apart from HIV and AIDS, give **three** other causes of mortality in East Africa.   (3 marks)
    (b) State **two** ways in which the spread of HIV and AIDS in Kenya may slow down economic development.
    (2 marks)

3. (a) Distinguish between land reclamation and land rehabilitation.   (2 marks) (b) State **three** methods that are used to control tsetse flies in Kenya.   (3 marks)

4. (a) Name **two** main cattle breeds reared by nomadic pastoralists in Kenya.   (2 marks)
    (b) State **three** environmental conditions which favours beef farming in Argentina.   (3 marks)

5. (a) Name **three** forest reserves in Kenya.   (3 marks)
    (b) State **three** characteristics of equatorial rain forest.   (3 marks)

    SECTION B:
    Answer question 6 and any other two questions from this section.

6. The table below shows the total number of horticultural crops exported from Kenya in 2008 and 2009. Use it to answer question a(i) and a(ii) below.

Crop	Total number of horticultural crops	
	2008	2009
Oranges	942,000	965,000
Tomatoes	120,000	154,000
French beans	97,000	128,000
Passion fruits	94,000	103,000
Onions	19,000	24,000
Flowers	29,000	41,000
Total	1,301,000	1,415,000

(a) (i) Identify the crop which had the highest increase in the number of export in Kenya between 2008 and 2009 and indicate the change. (2 marks)

(ii) Calculate the percentage increase of onions between 2008 and 2009. (3 marks)

(iii) Draw a divided rectangle 15cm long and 5cm wide to represent the horticultural export from Kenya in

2009. Show your calculations. (10 marks)

(c) (i) Name **three** types of flowers grown in Kenya. (3 marks)

(ii) Explain how the following factors influence horticultural farming in the Netherlands.

(a) Technology. (2 marks)
(b) Marketing systems. (2 marks)
(c) State **three** reasons why horticultural crops are transported by air. (3 marks)

7. (a) (i) Name **two** mining methods used to mine diatomite in Kariandusi in Kenya. (2 marks)

(ii) State **three** formations in which minerals occur. (3 marks)

(b) State **four** factors influencing exploitation of minerals in Kenya. (4 marks) (c) Explain **three** negative effects of mining on the environment. (6 marks)

(d) The diagram below shows the occurrence of petroleum in the earth"s crust.
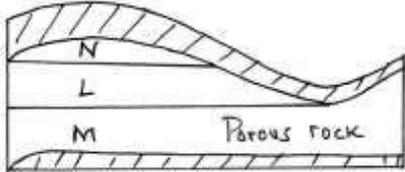
(i) Name the substances in the areas labelled **L**, **M and N**. (3 marks)
(ii) Give **two** by-products obtained when refining crude oil. (2 marks)
(e) State **five** significance of mining in Kenya. (5 marks)

8. (a) (i) Define the term tourism. (2 marks)
(ii) Name **three** natural habitats for wildlife. (3 marks)
(iii) Explain **five** problems facing wildlife conservation in Kenya. (10 marks)
(iv) State **five** significance of wildlife. (5 marks)
(b) (i) What is domestic tourism. (2 marks)
(ii) State **three** factors that hinder domestic tourism in Kenya. (3 marks)

9. (a) Name **two** types of trade. (2 marks)
(b) Explain **four** problems facing trade in East Africa. (8 marks)
(c) State **four** benefits that Kenya derives from international trade. (4 marks)
(d) Identify **three** measures taken by the Kenya government to reduce unfavourable balance of trade.

(6 marks) (e) You intended to carry out a field study on how trade is conducted in the local open air market.

  (i) Give **three** advantages of studying trade through field work.   (3 marks)

  (ii) State **two** methods the class may use to present their data.   (2 marks)

10. (a) (i) Differentiate between transport and communication.   (2 marks)

  (ii) State **two** modern means of communication used in Kenya.   (2 marks)

  (iii) Give **three** advantages of railway transport over road transport.   (3 marks)

 (b) (i) Explain **four** ways in which road transport has been improved in Kenya. (8 marks) (ii) Give **four** reasons why motorcycle transport has become common in most parts of Kenya.(4 marks)

 (c) (i) Name **two** canals found along the St. Lawrence Seaway.   (2 marks)

  (ii) State **four** reasons why the St. Lawrence Seaway project was set up. (4 marks)

KAHURO/KIHARU DISTRICT JOINT EXAMINATION – 2015
312/1
GEOGRAPHY PAPER 1
 MARKING SCHEME

SECTION A

1. (a) Name two layers of discontinuity that are part of the interior structure of the earth. (2mks)
 Mohorovicic
 Gutenberg   (*2 x 1 = 2 mks*)
(b) State three characteristics of the outer core in the interior structure of the earth. (3mks)
 The outer core is composed of molten rock material. It is made up of
iron and nickel It is about 2100 km to 2890 km thick.
 It has temperatures ranging from 3700^0C to $5,000^0$C
 It has an average density of 10.0gm / cc to 12.3gm/cc.   (*any 3 x 1 = 3 mks*)

2. (a) What is a land breeze? (2mks)
        It is a mass of cool air blowing from the land to the sea (during the night)
(*2 mks*) (b) Give three ways in which sea breezes influence the climate of adjacent land. (3mks) It
lowers temperatures of adjacent areas.
 It increases rainfall.
 It increases (relative) (humidity.
 It moderates diurnal rates of temperature.
 It may lead to convectional rainfall.   (*3 x 1 = 3 mks*)

3. (a) Name the types of grasslands formed in the following countries. (2mks)
(i) Canada - Prairies.
   (ii) Russia – Steppes   (*2 x 1 = 2 mks*)
(b) State three ways in which climate has influenced the desert vegetation. (3mks)
The area has scanty vegetation because of low rainfall.
 The high temperatures / high rate of evaporation leaves the ground dry leading to scanty vegetation.
 The long period of drought causes seeds to remain dormant state only to germinate during   short rains.
                                                                                          (*3 x 1 = 3 mks*)

4. (a) What is a lake? (2mks)
        A lake is an extensive body of water in a depression in the earth's surface   (*2 mks*)
(b) Give three reasons how water weeds have affected lakes in Kenya. (3 mks)
 Emergency of water weeds has choked the lakes hindering effective exploitation of lake resources.
 Emergency of water weeds has hindered water transport.
 When the weed rot, they affect the habitat of aquatic life.   (*3 x 1 = 3 mks*)

5. (a) Name two types of ice masses found on mountains in East Africa. (2mks)
 Valley glacier
 Ice caps
 Cirque glaciers.   (*any 2 x 1 = 2 mks*)
(b) Give three characteristics of a pyramidal peak. (3mks)
It has steep sides.
 It is surrounded by cirques.
 It has a sharp rock horn / has a sharp horn.
 It has radiating system of aretes.   (*3 x 1 = 3 mks*) **SECTION B**

6. **Study the map of Migwani 1:50,000, sheet 151/1 provided to answer the questions that follow.**
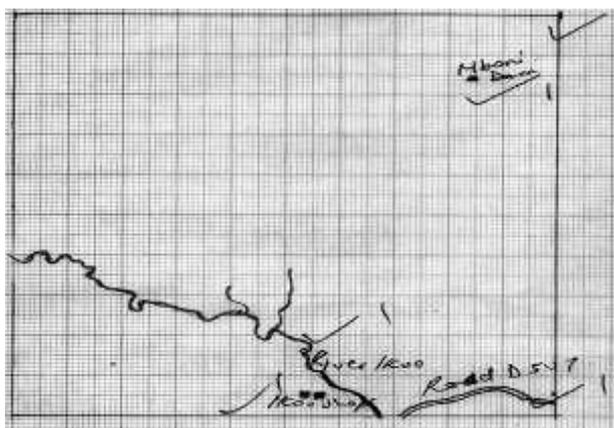
(i) Drawing rectangles   (1 mark)
(ii) Dry weather road D507   (1 mark)
(iii) River Ikoo   (1 mark)
      Mboni Dam   (1 mark)
      Ikoo Shops   (1 mark)
                                 (5 marks)

(a) (i) Identify two human made features in the grid square 9274. (2mks) ☐ School.
- ☐   Market
- ☐   Shops   *(any 2 x 1 = 2 mks)*

    (ii) What is the bearing of the Air photo principal point at grid square 9162 from the Air photo principal point at grid square 9167. (2mks)
         182° $\pm$ 1° (181° /183°)

    (iii) Give three types of vegetation in the area covered by the map. (3mks)
- ☐   Scrub
- ☐   Scattered trees
- ☐   Forest   *(3 x 1 = 3 mks)*

(b) (i) Reduce the area between eastings 00 and 10, and nothings 70 and 80 by half. (1mk) On it mark and name the following.
        Refer to the drawing above.
    (ii) What is the scale of the reduced height? (2mks)
        Former map   1: 50,000 x 2 ✓¹
        New map   1: 100,000 ✓¹   (2mks)

(c) Citing evidence from the map, identify five social services offered in Mutito (Ndooa) townin the South Eastern areas. (5mks)

Social service	Evidence	
☐ Education	Presence of school	
☐ Health	Presence of hospital	
☐ Water supply	Presence of water pipe	
☐ Security	Presence of Court house / District Office	
☐ Communication	Presence of post office	*(5 x 1 = 5 mks)*

(d) Describe the drainage of the area covered by the map. (6mks) ☐
There are many rivers.
- ☐   Rivers are permanent.
- ☐   The main river is Ikoo.
- ☐   River Ikoo forms dendritic pattern
- ☐   Some rivers have short courses e.g. East of Mtito hill.
- ☐   Some rivers have their source in Mtito forest.
- ☐   There are some disappearing rivers. Some rivers flow from North West to South East.

(any 6 x 1 = 6 mks)

7. (a) (i)   Name three types of faults. (3mks)

☐ Normal fault.
   ☐   Reverse fault
   ☐   Tear / shear fault
   ☐   Thrust fault
   ☐   Anticlinal fault.   *(any 3 x 1 = 3 mks)*

  (ii) Apart from tensional forces, explain two processes that may cause faulting.

   ☐   Faulting may caused by forces acting horizontally towards each other which causes compression of crustal rocks, due to compression forces.
   ☐   Faulting may also occur where horizontal forces act parallel to each other in opposite direction resulting in shearing / tearing.
   ☐   Faulting may also occur due to vertical movements which may exert a strain in the rocks making them to fracture.   *(any 2 x 2 = 4 mks)*

(b) With the aid of well labelled diagrams, describe how a rift valley is formed by tensional forces. (8mks) Figure (a)
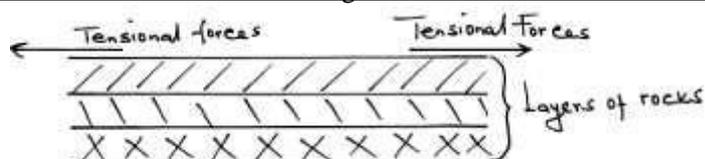
Layers of rocks are subjected to tensional forces. They moved away from each other.
Figure (b)
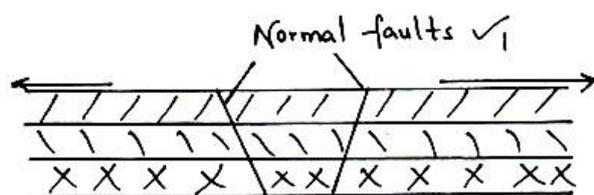
Lines of weakness occur leading to development of adjacent normal faults.
Figure (c)
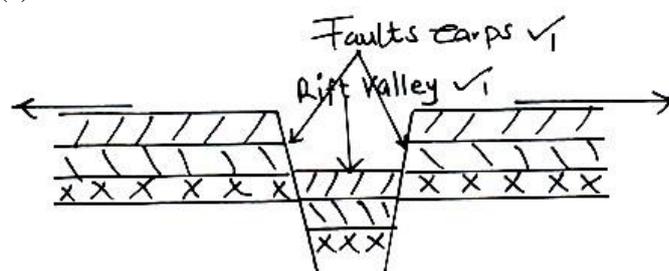
The central block sinks or subsides to form a long narrow depression called the rift valley.

Diagram - 5 mks
Text   - 3 mks
8 mks

(c) State three positive effects of faulting. (3mks)
☐   Faulting leads to formation of features that are tourist attraction.
☐   Depression in the rift valley contain water that form lakes - for fishing / mining / water for domestic use.
☐   Faulting exposes minerals which can be exploited by man.
☐   Step faulting makes rivers have waterfalls for H.E.P generation.

- Faulting leads to formation of rainfall which attract rainfall.
- Springs occur at the foot of the fault scarps creating settlement. *(any 3 x 1 = 3 mks)* (d) You are planning to carry out a field study of an area affected by faulting.

  (i) State four reasons why it is important to have a pre-visit of the area (4mks) □
    To enable them draw up study objective / hypothesis. □   To identify possible problems

- To enable them draw a route map.
- To enable them prepare a work schedule / plan of activities.
- To enable them identify / sort out relevant tools / equipment for the study.
- To identify suitable methods of data collected.
- To seek permission from the occupants of their site of study.
  - To Enable them prepare financial requirements. *(any 4 x 1 = 4 mks)*

  (ii) Give three disadvantages of direct observation in such an area. (3mks) □
    It is expensive if one has to travel long distances.
  - It is time consuming.
  - It is tiresome.
  - It is only limited to direct sources / primary sources of data.
  - It is only suitable to sighted people.
  - Some features may be hidden / out of view *(any 3 x 1 = 3 mks)*

8.
(a) What is weathering? (2mks)
□ Weathering is the breaking down / disintegration and decomposition of rocks at or near the earth's surface in situ.
(2 mks)

(b) Give five processes involved in physical weathering (5mks) □
Pressure release / off-loading / sheeting.
- Block disintegration.
- Exfoliation.
- Frost action.
- Crystallization.
- Shaking / wetting and drying.
- Granular disintegration. *(any 5 x 1 = 5 mks)*

(c) (i) Apart from plants, give factors that influence the rate of weathering. (4mks) □
    Nature of the rock.
  - Climate / temperature / rainfall.
  - Human activities / animals.
  - Time taken.
  - Nature of slope. *(any 4 x 1 = 4 mks)*

  (ii) Explain three ways in which plants cause weathering. (6 mks)
  - As plants grow, their roots penetrate into cracks / joints causing them to widen and eventually rock disintegrates.
  - Plants absorb mineral from rocks and this weaken them causing them to disintegrate.
  - As plants rot on rocks, they release organic acids which then react with some minerals in the rocks leading to disintegration of the rocks. *(any 3 x 2 = 6 mks)*

(d) Explain four effects of weathering. (8mks)
- Weathering leads to the formation of soil important to man for agriculture.
- Weathered rocks offer beautiful sceneries for tourist attractions.
- Weathering breaks rocks making mining easier. Weathering also produces minerals such as bauxite.
- Weathering reduces sizes of rocks providing suitable materials for construction e.g. rock blocks and sand.
- Weathered crust of the earth is important to engineering, for it is necessary to establish how deep it is and remove so as to construct buildings on firm foundation.

9.

(a) (i) <u>Differentiate between a watershed and a catchment area. (2mks)</u>
Watershed is a ridge like/boundary line that separates drainage/river systems / basins while a catchment is an area / land which a river / reservoir drains its water / source of a river. (*2 mks*)

  (ii) <u>State four conditions necessary for the formation of an ox-bow lake. (4mks)</u> ⬜
Presence of pronounced meanders in the flood plain.
  ⬜ Heavy load being carried by the river.
  ⬜ A reduction in the river gradient / low velocity.
  ⬜ Lateral erosion on the outer side of the river banks.
  ⬜ Deposition on the inner side of the river banks.
  ⬜ Periodic flooding to cut off the neck of the pronounced meanders.   (*any 4 x 1 = 4 mks*)

(b) <u>Explain four ways in which a river transports its load.(8mks)</u>
⬜ <u>Suspension</u> : The fine particles such as silt are carried inside the water because they are light and an be carried within turbulence of water.
⬜ <u>Saltation</u>: Fairly heavy particles / pebbles are lifted and bounced over short distances by the turbulence of water.
⬜ <u>Traction</u> / rolling: The large and heavy particles are rolled along the river bed.
⬜ <u>Solution</u>: Soluble materials are dissolved in water and carried in form of solution.   (*any 6 x 2=12 mks*)

(c) <u>Explain three negative effects of rivers for the human environment. (6mks)</u>
⬜ When rivers flood, they destroy a lot of property / crops and may lead to loss of human life.
⬜ Wide / deep rivers are barrier to transport especially where bridges have not been constructed.
⬜ River water can be a medium of spreading water borne diseases since flood waters may spread chemicals from farms / human waste which contaminate sources of water.
⬜ Some rivers are habitat of dangerous animals which may attack human being / destroy crops.
(*any 3 x 2 = 6 mks*)

(d) <u>State three characteristics of youthful stage of a river.</u>
⬜ The river is fast and aggressive.
⬜ Main work is eroding / vertical erosion is dominant.
⬜ Presence of water falls and rapids.
⬜ It forms V-shaped valleys.
⬜ There are gorges.
⬜ Presence of pot holes.
⬜ Interlocking spurs are also formed.   (*any 3 x 1 = 3 mks*)

(e) <u>Name two features resulting from river rejuvenation.</u>
⬜ River terraces.
⬜ Incised meanders.
⬜ Rejuvenation gorges
⬜ Knick points.   (*any 2 x 1 = 2 mks*)

10.

(a) (i)<u>Apart from limestone pillar, give three other underground features in a limestone area. (3mks)</u> ⬜
Stalactite.
  ⬜   Stalagmite
  ⬜   Cave / cavern
  ⬜   Underground rivers.
  ⬜   Gorges.   (*any 3 x 1 = 3 mks*)

  (ii) <u>Describe how a limestone pillar is formed (6mks)</u>
  ⬜   Solution of calcium bicarbonate tricles down slowly through the roof of a cave / cavern.
  ⬜   Solution droplets hang on the roof, the cave.
  ⬜   Water evaporates and the calcium carbonate is precipitated.
  ⬜   The precipitated calcium carbonate gradually builds downwards over a period of time as the solution continues to drip from the roof to form a stalactite.
  ⬜   Solution splashes on the floor, water evaporates and calcium carbonate is precipitated.
  ⬜   The precipitated calcium carbonate gradually builds upwards to form a stalagmite.

☐ Over time the stalactite and stalagmite join to form a limestone pillar. (*any 6 x 1 = 6 mks*)

(b) (i) <u>State four factors which affect the occurrence of underground water. (4mks)</u> ☐ Precipitation and evaporation in the area.

☐ Porosity of the rocks.

☐ Permeability of the rocks.

☐ Nature of slope

☐ Vegetation cover. (*any 4 x 1 = 4 mks*)

(ii) <u>Give three ways in which springs occur (3 mks)</u>

☐ Springs may occur where there is a well jointed limestone.

☐ Springs may occur at the foot of a steep scarp slope.

☐ Springs may occur where a permeable rock lie on top of an impermeable rock on the hill side.

☐ Spring may occur where an igneous dyke cuts across a layer of permeable rock. (*any 3 x 1 = 3 mks*)

(c) <u>You are supposed to carry out a field study of an area eroded by water.</u>

(i) <u>Give four reasons why you need a map of the area of study. (4mks)</u> ☐ To show the extent / delimit the area of study.

☐ To show the route to be followed during the study.

☐ To show drainage features.

☐ To be able to estimate distances.

☐ To show the general nature of the terrain. (*any 4 x 1 = 4 mks*)

(ii) <u>Name two erosional features you are likely to identify during the field study. (2mks)</u> ☐ Exposed rocks / inselbergs /tors ☐ Ridges / clints.

☐ Gullies / wadis / dry river beds / gorges.

☐ Earth pillars. (*any 2 x 1 = 2 mks*)

(iii) <u>State three recommendations that you would make from your study to assist the local community to rehabilitate the eroded areas. (3mks)</u> ☐ Building of gabions.

☐ Constructing terraces.

☐ Planting trees.

☐ Adapting farming methods that allows conservation of soil / planting cover crops / mulching / strip cropping.

(*any 3 x 1 = 3 mks*)

KAHURO/KIHARU DISTRICT JOINT EXAMINATION – 2015
312/2
GEOGRAPHY PAPER 2
 MARKING SCHEME

SECTION A

1.

(a) <u>Two advantages of using solar energy. (2mks)</u> ☐

It is a renewable source of energy.

☐ Less pollutant.

☐ Once installed no extra charges.

(b) <u>Two non-renewable sources of energy used in Kenya. (2mks)</u> ☐

Natural gas

 Petroleum oil.

2.

(a) Apart from HIV and AIDS, give three other causes of mortality in East Africa.

 Natural calamities.

 Other epidemics / diseases.

 Conflicts / civil wars / tribal clashes.

 Road carnage / accidents.

 Low nutritional standards / famine / lack of food.

 Inadequate medical facilities / poor medical facilities.   (*any 3 x 1 = 3 mks*) (b) Two ways in which the spread of HIV and AIDS in Kenya slow down economic development.

 The sickness leads to absenteeism from work / reduced productivity.

 Money spent in treating the sick could be used for other economic activities.

 Deaths resulting from the disease lead to loss of economically productive population.

 Care-takers at family cover use more time caring to the sick / orphans instead of engaging in economic activities / high dependency ratio.   (*any 2 x 1 = 2 mks*)

3.

(a) Distinguish between land reclamation and land rehabilitation. (2mks)

Land reclamation is the process of converting less productive land into a more productive state for agricultural or settlement purposes while

Land rehabilitation is the process of restoring degraded / improvised / damaged land back to useful

state. (b) Three methods that are used to control tse tse flies in Kenya. 3mks Bush clearing of tsetse fly habitat.

 Spraying using insecticide.

 Using of traps.

 Construction of buffer zones.

4.

(a) Name two main cattle breeds reared by nomadic pastoralists in Kenya. (2mks)

 Zebu

Boran.

 (b) State three environmental conditions which favour beef farming in Argentina. (3mks)

 Moderate rainfall / 1000 mm per annum for the growth of pasture.

 Moderate temperature / 24^0 C in summer and 10^0 C in winter / Climate suitable for continuous growth of pasture.

 Fertile soils for the growth of pasture.

 Availability of vast lands suitable for cattle grazing.

 Low-lying land suitable for grazing.

5.

(a) Three forest reserves in Kenya.

 Arabuko Sokoke

 Witu

 Mt. Kenya forest.

 Kakamega forest   (*any 3 x 1 = 3 mks*)

(b) Three characteristics of Equatorial rainforest. (3mks)

The forests have a variety of species.

 The trees are mostly hardwoods.

 The forests are evergreen as they shed leaves off different types of the year.

 The trees are tall and form a canopy.

SECTION B.

6. (a) (i)   Tomatoes.
                   (154000 - 120,000) = 34,000
   (ii)   Percentage increase of unions.
               24000 - 19000
               $\underline{5000}$ x 100% = 26.31 / 26.32
               19000
   (iii)   The divided rectangle showing horticultural crop export from Kenya in 2009.

(a)   Oranges $\underline{965,000}$ x 15 cm = 10.2 cm
                       1,415,000

(b)   Tomatoes $\underline{154,000}$ x 15 cm = 1.6 cm
                       1,415,000

(c)   French beans $\underline{128,000}$ x 15 cm = 1.4 cm
                           1,415,000

(d)   Passion fruits $\underline{103,000}$ x 15 cm = 1.0 cm
                           1,415,000

(e)   Onions $\underline{24,000}$ x 15 cm = 1.3 cm
                   1,415,000

(f)   Flowers $\underline{29,000}$ x 15 cm = 0.4 cm
                   1,415,000

Oranges	Tomatoes	French beans	Passion fruits	Onions	Flowers
10.2m Oranges	1.60m	1.4	1.0	0.3	0.3
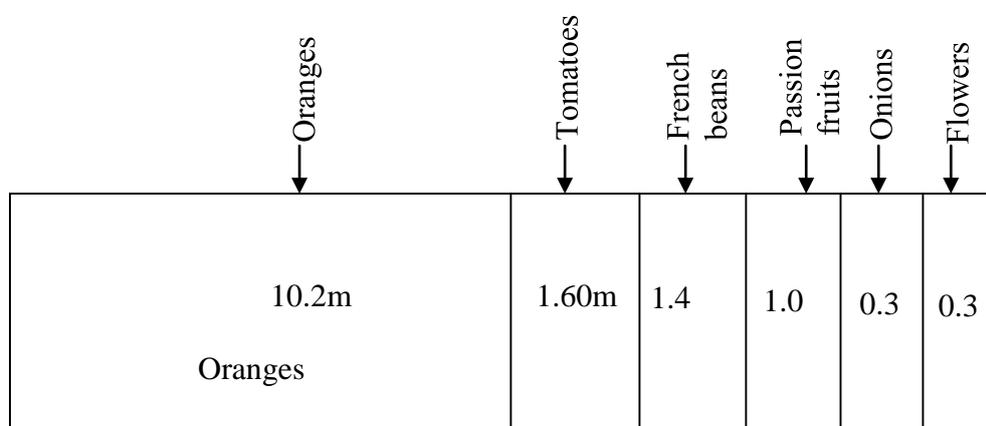
(b) (i) Three types of flowers grown in Kenya.(3mks)
   ▢ Roses
   ▢ Orchids ▢ Carnations.
   ▢ Gladioli
   (ii) Technology
  Farmers have advanced technology in the use of hot or glass houses.   Marketing system
  Farmers have highly organized co-operatives societies which market or auction the products.
(c) Three reasons why horticultural crops are transport by air. (3mks) ▢
   The are light in weight.
   ▢ They are perishable hence must reach market very fast.
   ▢ Their high prices can meet freight charges.

7. (a) (i) <u>Name two mining methods used in Kariandusi in Kenya. (2mks)</u>
- Open cast
- Adit mining

(ii) <u>State three formation in which minerals occur. (3mks)</u>
- Veins and lodes
- Layers and seams
- Weathering products.
- Alluvial or placer deposits.

(b) <u>State four factors influencing exportation of minerals in Kenya.(4mks)</u>
Value of the mineral.
- Size of the mineral deposit.
- Quality of the ore.
- Transport cost.
- Availability of labour.
- Method of extraction.
- Political interference / boarder disagreement ☐ Civil wars.
- Demand for the mineral.
- Availability of capital   *(4 x 1 = 4 mks)*

(c) <u>Explain three negative effects of mining on the environment. (6mks)</u>
Mining causes land destruction / ugly land / badlands.
- Mining causes pollution of environment air, water, soil and also noise.
- Mining causes loss of bio-diversity - animals migrate, vegetation cleared.
- Leads to soil erosion since land remains bare.
- Mining may lead to landslides.
- Mining may lower the water table of a given place.

(d) (i) <u>Name the substances in the area labelled L, M and N. (3mks)</u>
   L - Petroleum oil
   M - Water
   N - Gas

(ii) <u>Two by-products obtained when refining crude oil. (2mks)</u>
- Tar
- Wax
- Bitumen / pitch / asphalt ☐ Grease lubricants.
- Resin / petrol chemicals   *(2 x 1 = 2 mks)*

(e) <u>State five significance of mining in Kenya. (5mks)</u>
   ☐ Mineral provide raw materials for industries.
- Minerals lead to development of transport and communication e.g. road, railways, telephone.
- Mining creates employment.
- Mining leads to development of settlement / towns e.g. Magadi town.
- Minerals are exported to earn foreign exchange.
- Mining leads to development of social amenities e.g. hospitals, schools.   *(5 x 1 = 5 mks)*

8
(a) (i) <u>Define wildlife. (2mks)</u>
   Wildlife refers to all undomesticated plants and animals in their natural habitat.
   (ii) <u>Name three natural habitats for wildlife. (3mks)</u>

☐

☐

- ☐ Forests
- ☐ Woodlands
- ☐ Acacia / Savannah grasslands
- ☐ Scrub lands
- ☐ Desert and arid semi land
- ☐ Rivers, lakes and swamps   (*3 x 1 = 3 mks*)

(iii) Explain five problems facing wildlife conservation in Kenya. (10mks)

Poaching - Illegal hunting of wildlife in the game parks for their products.

Human encroachment - Increasing human population in search of land for settlement takes up wildlife areas.

- ☐ Overpopulation of animals - Some of the game parks like Tsavo have exceeded their carrying capacity leading to overgrazing.
- ☐ Pollution - Some tourists who visit game parks throw waste in the parks which can be harmful to the animals.
- ☐ Drought - During certain times of the year drought in the savannah and other arid and semi-arid areas occur which may cause migration.
- ☐ Pests and diseases are a major threat to wildlife like the Felima Immunodeficiency Virus (FIV)
- ☐ Inadequate capital to carry out conservation and development of transport routes leading to and in the parks.

(5 x 2 = 10 mks)

(iv) State five significance of wildlife. (5mks)

- ☐ Earns foreign exchange through tourist who are attracted to the natural beauty of both the animals and plants.
- ☐ Wildlife conservation employs a large number of personnel in the field as game rangers, tourist guides and drivers.
- ☐ Preservation of flora helps to protect and preserve water catchments areas and soils.
- ☐ Wildlife   i.e. available economic utilization of marginal areas with little rainfall.
- ☐ Wildlife under controlled hunting is a source of game meat.
- ☐ Wildlife is important for the aesthetic value, its natural heritage that must be preserved for future generation.
- ☐ Some wild plants are of medicinal value e.g. aloe and neem trees.
- ☐ Wildlife provides scientists with a field in which they can study and carry out research.(*5 x 1 = 5mks*)

(b) (i) What is domestic tourism? (2mks)

        It is touring of a country for leisure and adventure by the residents of the country.

(ii) Explain three factors that hinder domestic tourism in Kenya. (3mks) ☐ Negative attitude towards local tourism by the citizens.

- ☐ High cost of accommodation in the lodges and hotels discourages many people.
- ☐ Poor transport and communication network of roads leading to the parks and other attractive sites.
- ☐ Preferential treatment given to the foreign tourists discouraged locals.
- ☐ Inadequate knowledge on the tourist attractive sites.   (*3 x 1 = 3 mks*)

9.

(a) Type of trade. (2mks) ☐

Internal / home trade.

☐ External / foreign trade or international.

(b) Problems facing trade in East Africa.

- ☐ Cheap agricultural export in the world market compared to expensive industrial imports i.e. machines.
- ☐ Fluctuation of prices of agricultural products in the world market.
- ☐ Competition from countries producing similar products.
- ☐ Trade restriction imposed to East African countries by other countries of the world.
- ☐ Inadequate transport and communication facilities rising cost of goods.
- ☐ Smuggling and misuses of resources resulting to loss of revenue.   (*any 4 x 2 = 8 mks*)

☐

☐

(c) Benefits that Kenya get from international trade. (4mks)

☐ She is able to disposes her surplus production (export) ☐ She gets what she does not produce. (import) ☐ Earning foreign exchange.

☐ Development of infrastructure.

☐ Create employment.

☐ Source of government revenue.

☐ Exploitation of natural resources.

(d) Three measures taken by the Kenya government to reduce unfavourable B.O.T. (6mks) ☐ Establishment of import substitution industries reduce importation of commodities.

☐ Encouragement of use of appropriate local technology that does not require heavy machinery.

☐ Encouragement of local assembling of machines since importation of spare parts is cheaper.

☐ Encouraging exportation of locally manufactured goods.

☐ Establishing export industries.

☐ Diversifying agriculture to reduce overreliance on tea / coffee.

☐ Development of other sources of energy e.g. solar biomasses in order to reduce importation of oil.

(c) (i) Three advantages of studying trade through field work.

It enables one to get first hand information.

It makes learning interesting as it breaks the class monotony.

☐ It makes learning real.

☐ It enables one to retain information learned.

☐ It enables one to share information.

☐ It enables one to apply skills learnt / acquire skills. (*any 3 x 1 = 1 mks*)

(ii) Two methods the class may use to present data.

☐ Drawing tables.

☐ Drawing charts.

☐ Drawing graphs.

10.

(a) (i) Differentiate between transport and communication. (2mks)

Transport is the act of carrying or conveying goods or people from one place to another while communication is the transmission of messages or information from one place to another.

(ii) Two modern means of communication used in Kenya. (2mks) ☐

Cell phone / mobile phone / telephone.

☐ Fax

☐ Telex

☐ Telegram

☐ Email

☐ Internet. (*2 x 1 = 2 mks*)

(iii) Three advantages of railway transport over road transport. (3mks) ☐

Trains are less prone to accidents compared to vehicles.

☐ Trains are more efficient because they operate on a fixed time schedule.

☐ Railway transport is cheaper than road transport.

☐ Once built, railways do not require frequent repairing unlike roads which are frequently resurfaced.

☐ Trains carry bulky goods over long distance at once.

☐ Railways are less susceptible to traffic jams. (*3 x 1 = 3 mks*)

(b) (i) Four ways in which road transport has been improved in Kenya. (8mks)

☐

☐

- Construction of highways to accommodate more traffic and improve traffic flow e.g. Nairobi - Mombasa highway, Thika Superhighway.
- Construction of by-passes, flyovers in Nairobi and along Thika Super Highways to reduce congestion and improve traffic flow.
- Rehabilitation and maintenance of major roads to reduce road accidents and improve traffic flow.
- Control of loads carried by trailers and large lorries by traffic police to reduce damage on road surface.
- Educating road users on road safety precautions and discipline on roads to ease traffic and to reduce road/accidents.
- Enforcing traffic rules to reduce road accidents and regular traffic flow.   (*4 x 2 = 8 mks*)

(ii) Four reasons why motorcycle transport has become common in most parts in Kenya. (4 marks) □ Motorcycle offer services into areas than the inaccessible by motor cycle.

- Motorcycles are more affordable than vehicles.
- Motorcycle are cheaper to maintain than vehicles.
- Most roads to the interior of some parts of the country are narrow making motorcycles the most suitable means of transport.
- Motorcycle require minimal skills to ride so many people are able to use them   (*4 x 1 = 4 mks*) (c) (i) Two canals found along St. Lawrence seaway.
- Soo canal □ Welland canal.
- Newyork State berge canal □ Sault St. Marle canal.
- Nipssing canal.
- Rudan canal   (*2 x 1 = 2 mks*)

    (ii) Four reasons why the St. Lawrence seaway project was set up (4mks)
- To remove rock shoals, rapids and several islands in the river channel that hindered navigation.
- To deepen the river channel and regulate the difference in the lake level.
- To construct dams to generate H.E.P and regulate the flow of the river.
    To construct locks among the route to regulate the flow water as well as movement of the vessels.
    To construct canals by-passing the sections with rapids and waterfalls along river St. Lawrence.

□
□

KURIA EAST SUB-COUNTY JOINT EXAMINATION COUNCIL 2015
Kenya Certificate of Secondary Education (K.C.S.E)
312/1
GEOGRAPHY
**Paper 1**

SECTION A: (25 MARKS)
Answer all the questions in this section
1. a) Define the term lake   (2 mks)
   b) Give an example of the lakes produced by wind erosion in Africa.   (1 mk) 2. a)
State **three** factors that influence the salinity of water in oceans.   (3 mks)   b)
Name **three** types of Islands   (3 mks)
3. a) State three conditions under which dew forms.   (3 mks)
   b) A mass of air at 30oc can hold 17.117gm/m3 of moisture. The same air at the same temperature has
   8.262gm/m3 of moisture. Calculate its relative humidity.   (3 mks)
4. a) Distinguish between orogeny and orogenesis.   (2 mks)   b) Name the countries where the following fold
   mountains are found.   (3 mks) i) A kwapim hills ii) Deccan Plateau
            iii)   Cape ranges

5. a) What is mechanical weathering.   (2 mks)   b) State **three** causes of mechanical weathering.   (3 mks)
   SECTION B
   Answer question 6 and any other Two questions from this section

6. Study the map of Migwani (1:500 000) sheet 151/1 provided and answer the following questions
   a) i)   Identify **two** human features found in grid square 1064.   (2 mks)
     ii) What is the length of the water pipeline to the east of the area covered by the map. Give your answer
     in
          Km.   (2 mks)
b) i)   Name **three** drainage patterns found in the area covered by the map.   (3 mks)
ii)   Give **three** types of vegetation found in Migwani   (3 mks) c)
Calculate the area of the part enclosed by roads D509 and D507. Give your answer in Km2.   (3 mks)
   d)   Describe the relief of the area covered by the map.   (3 mks)
   e)   Citing evidence from the map, give **two** economic activites carried out in the area covered by the map.
                                                                                                         (2
mks)
   f) Students from your school are required to carry out a field study of the drainage in the area covered by
      the map.
            i)   Give **two** reasons why they would require a route map.   (2 mks)
            ii)   State **three** characteristics of a river at the youthful stage that they are likely to observe
            during the
     field study.   (3 mks)   iii) Apart from observation, name other **two** methods they are likely to use to
collect their data.
                                                                                                         (2 mks)
7. a) Define the term earthquake.   (2 mks)   b) Give **three** main types of regions where earthquakes occur.
   (3 mks)
      c)   Study the diagram below and answer the questions that follow.
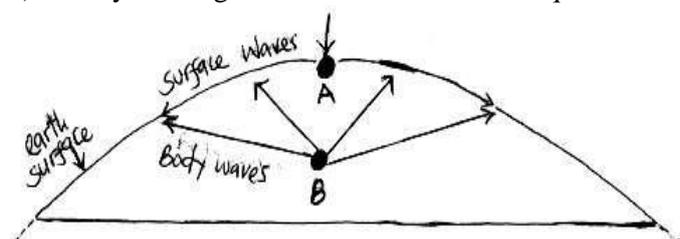
Name the parts marked A and B   (2 mks

d) Outline two types of earthquake waves   (2 mks)

e) State **five** ways in which the earth"s crust is affected by earthquakes   (5 mks)

f) i) What is natural vegetation   (2 mks)   ii) State **three** climatic factors which influence the distribution of vegetation. (3 mks)   iii) State **six** characteristics of the tropical rainforest.   (6 mks)

8. a) i) Define underground water   (2 mks)   ii) List **three** factors which affect the occurence of underground water. (3 mks)   ii) State **four** conditions favouring the location of the artesian well.   (4 mks)   b) i) State **three** conditions that favour the formation of features in limestone areas. (3 mks)   ii) Using well labelled diagrams, explain how the following features are formed

   a)   Stalactites
   b)   Stalagmites
   c)   Limestone pillar   (6 mks)   c) You are planning to carry out a field study in a limestone area.

i) Formulate **two** hypotheses for the study.   (2 mks) ii) Name **three** surface features you are likely to identify. (3 mks) iii) State **two** problems you may encounter while in the field.   (2 mks)

9. a) Explain how the following features are formed following the action of water in arid areas.

i) Wadis   (2 mks) ii) Pediplains   (2 mks) iii) Bajadas   (2 mks)   b) State three negative impacts of desert landforms   (3 mks)

c) i) Define micro-climate   (2 mks) ii) Name **three** areas experiencing micro-climates   (3 mks) iii) State **four** consequences of climate change.   (4 mks)   d) i) Outline **four** characteristics of hot desert vegetation (4 mks) ii) Name **three** zones of mid-latitude grasslands.   (3 mks)

10. a) Define

i) Divide   (1 mk) ii) Confluence   (1 mk)

b)   State **three** factors affecting the rate of river- erosion.   (3 mks)

c)   i)   Differenciate between river capture and rejuvenation.   (2 mks)   ii)   State **three** factors influencing river capture
          (3 mks)   d) Outline **three** characteristics of a river at the mature stage.
          (3 mks)

e)   i) Give **two** types of lacustrine deltas.   (2 mks) ii) State **three** conditions that influence the formation of deltas.   (3 mks)

f)   Describe how a river erodes its channel through the following processes.
         i)   Abrassion   (2 mks) ii) Hydraulic action   (2 mks)

g) State **three** negative effects of rivers.   (3 mks) **KURIA EAST SUB-COUNTY JOINT EXAMINATION COUNCIL 2015**

Kenya Certificate of Secondary Education (K.C.S.E)
312/2
GEOGRAPHY
Paper 2

SECTION A: (25 MARKS)
Answer all the questions in this section

1.   a) Name **two** conditions that favour the growth of hardwood forests.   (2 mks)
b) Outline **three** characteristics of soft wood forests in Kenya.   (3 mks)
2.   a) Distinguish between national park and game reserve.   (2 mks)
b) Give **three** benefits of eco-tourism.   (3 mks)
3.   a) What is communication?   (2 mks)   b) Name any **three** modes of modern communication.   (3 mks)
4.   Below is a sketch map showing the great lakes and St. Lawrence sea way. Use it to answer question (a).
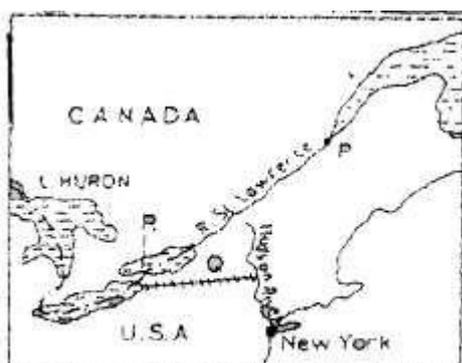
KEY
— - — - — International boundary

a)   Name
      i)   The part marked P   (1 mk) ii) The canal marked Q   (1 mk) iii) The lake
            marked R   (1 mk)
b)   State **three** ways in which the great lakes and st. Lawrence sea ways have contributed to the growth of
industries in the region.   (3 mks)

5.   a) Apart from HIV and Aids. give **three** other causes of mortality in East Africa.   (3
mks)
   b) State **two** ways in which the spread of HIV and Aids in Kenya may slow down economic development.
                                                                                    (2 mks)

SECTION B
Answer question 6 and any other two questions from this section
6.   The table below shows the value of Kenyans imports and expors in 2009, use it to answer questions a.

IMPORTS		EXPORTS	
ITEM	VALUE IN K $ '000'	ITEM	VALUE IN K $ '000'
Food & Beverages	760,000	Food, Beverage and tobacco.	3,270,000
Industrial supplies (Non food)	3,400,000	Basic materials minerals fuels and lubricants.	1,100,000
Fuel and lunbricants	2,000,000	Manufactured goods	1,400,000
Machinery and other capital requirements	1,700,000	Miscellaneous goods	30,000
Transport	1,500,000		
Miscellaneous	960,000		
Total	10,320,000	Total	5,800,000

a)   Use a radius of 5cm. draw a pie chart to represent data on exports shown on the table above. (Show
   your calculations.   (9 mks)   b) Explain **four** measures which Kenya may take to reduce the
unfavourable balance of trade. (8 mks)
   c) Explain **four** benefits that Kenya derives from international trade.   (8 mks)
7.   a) i) What is a game sanctuary?   (1 mk) ii) Name **three** game sanctuaries in Kenya.   (3 mks)
      b) Discuss **five** ways in which wildlife is of significant to East Africa.   (10 mks)
      c) Explain **three** problems facing wildlife in Kenya.   (6 mks)
      d) Distinguish between management and conservation of wildlife.   (2 mks)
      e) Outline **three** conservation measures taken to protect flora and fauna in Kenya.   (3
         mks)
8.   a) i) Name three areas where cocoa is grown in Ghana.   (3 mks)
            ii) State **four** physical conditions necessary for cocoa growing   (4
mks)   b) Describe cocoa processing from harvesting to marketing.   (8 mks
      c) Explain **three** problems experienced by cocoa farmers.   (6 mks)

d) Apart from making of oil, state **four** other uses of oil palm. (4 mks)

9. The pyramid below represents the population structure of country X. Use it to answer the questions that follows
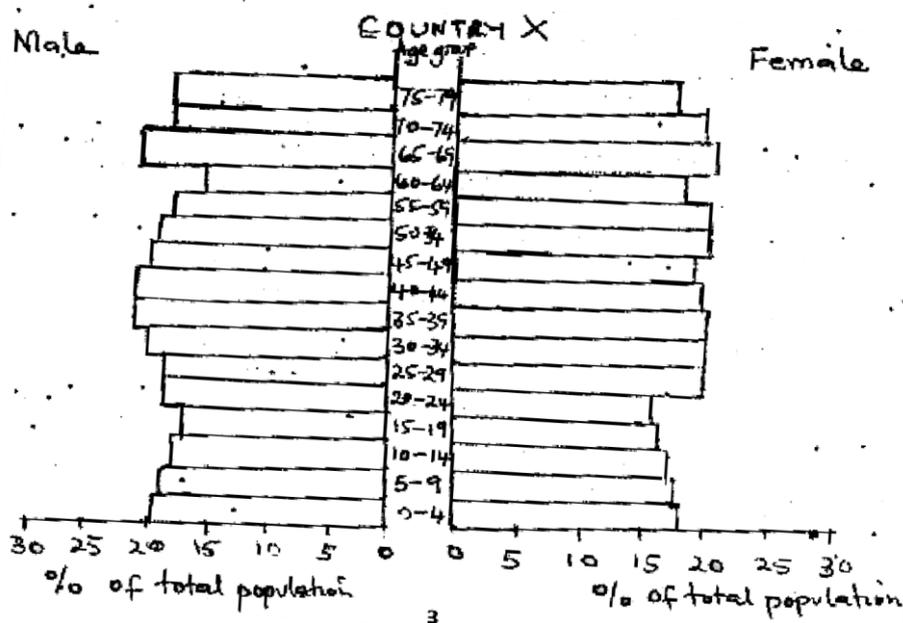
a) Describe the characteristics of the population represented by the pyramid (8 mks)

b) i) State **three** reasons why it is necessary for a country to carry out population census. (3 mks)   ii) Explain how the following factors have led to the population increase in Kenya.

☐ Early Marriages (2 mks)
☐ Improved medical facilities (2 mks)
☐ cultural beliefs (2 mks)

c) Your Geography class intends to carry out field study on population around the school.

i) State **two** reasons for reconnaissance survey. (2 mks)   ii) Outline **two** problems they are likely to face in the field. (2 mks)   iii) What advice would you give to the government to curb child mortality. (2 mks)   iv) State **two** ways in which you might have collected your data. (2 mks)

10. a) i) Define the term pollution. (2 mks) ii) State **four** causes of land pollution. (4 mks)   b) i) Name **two** places in Kenya which occassionally experience flooding. (2 mks) ii) Explain **three** major causes of widespread flooding in Kenya. (6 mks)   iii) State **four** methods used in controlling and managing floods in Kenya. (4 mks)   c) i) State **three** problems caused by lightening. (3 mks) ii) Give **four** measures used to control and manage lightening in Kenya. (4 mks) **KURIA EAST DISTRICT JOINT EXAMINATION COUNCIL**

GEOGRAPHY PAPER 1
PAPER 1
MARKING SCHEME

1.

a) A lake: a mass of water which occupies a basin, depression✓1 or a wide hollow on the surface of the earth.✓1

(2mks)

b) Qattara depression in Egypt (1mk) 2.

a) Factors that influence the salinity of water in oceans

☐ Volcanic materials resulting from volcanism on the ocean floor or neighbouring land add salts to the water.
☐ Salt rocks in contact with ocean are dissolved adding the salts
☐ Some salts is added by rivers which have dissolved it from rocks over the land.

☐ Most of the salt is thought to have been present when the water bodies were formed. (any 3x1=3mks) b)

Types of island ☐ Coral islands

☐ Continental islands

☐ Oceanic island (3x1=3 mks) 3.

a) Conditions under which dew forms

   i) The air should be calm so that it can remain in contact with the ground long enough to be cooled below its dew point.

   ii) Daytime should be warm to accelerate evaporation and thus provide a lot of water vapor in the air

   iii) A cloudless night accelerates the rate at which the earth losses the heat gained during the day. (3x1=3 mks)

b) $$Relative\ Humudity = \frac{Absolute\ humidity}{The\ maximum\ amount\ of\ water\ vapour\ the\ air\ could\ hold\ at\ the\ same\ temp} \times 100$$

$$\frac{8.262}{17\ 117} \times 100$$

$$= 4\dot{8}\%$$

4.

a) Oregeny is the period in which fold mountains were build while orogenesis is the process of fold mountain building building. (2 mks) b)

   i) Akwapim hills-Ghana

   ii) Deccan Plateau-India

   iii) Cape ranges-S. Africa (3 mks)

5.

a) Mechanical weathering is the physical break-up or disintegration of rock material without any alteration in it"s chemical composition.

b) Causes of mechanical weathering ☐ Growth of crystals within a rock mass

☐ Temperature changes involving heating and cooling

☐ Frust action involving action of ice on the rocks

☐ Pressure release involving the reduction in weight of materials covering rocks

☐ Rain water involving slaking, due to alternate wetting and drying of minerals within the rocks. (any 3x1=3mks)

SECTION B

6.

a) i) Human features

   i) Houses

   ii) Shops

   iii) Dry weather road

   iv) Telephone line (any 2x1=2mks) ii) $19.6 \pm 1cm$

b)

  i) Drainage pattern

    a. Centripetal drainage pattern

    b. Dendritic drainage pattern

    c. Trellised drainage pattern (3x1=3mks)

  ii) Types of vegetation

    a. Scattered trees

    b. Scrub

  i) Forest (3x1=3mks) c)

Area F.S=26

    H.S=19

$$\overline{2=9.5}$$
$$26 + 9.5 = 35.5 x 1 km = 35.5 km^2 \ (3mks)$$

d) Relief of the area

☐ The area to the east is plain as evidenced by spaced contours.

☐ The Southern part of the area covered by the map is characteristised by hills. (e.g. Kitui hills,

☐ Generally the area covered by the map is deeply cut as evidenced by crooked contours   (3x1=3mks) e)

Economic activities ☐ Transportation-roads

☐ Trade-shops

☐ Quarrying-quarry   (any 2x1=2mks) f)

Importance of a route map

i)

☐ It saves time

☐ It shows the distance to be covered.   (2x1=2mks) ii)

Youthful river is characterized:

☐ It erodes its valley by headward and vertical erosion

☐ The river flows fast because of the steep gradient over which it is flowing ☐ Vertical erosion is dorminant resulting in a narrow and v-shaped valley.

☐ Erosion forms pot holes on the river bed.

☐ Interlocking spurs, waterfalls, rapids, gorges are common.   (any

3x1=3mks) iii) Methods of collecting data ☐ Interviewing

☐ Taking photographs   (2 mks)

7.

a) Earthquake is shaking or trembling of the rocks of the surface of the earth, caused by shock waves that originate below the surface of the earth.   (2mks) b) Major regions where earthquakes occur

☐ Mid-ocean ridges

☐ Ocean deeps and volcanic island

☐ Regions of crustal compression

☐ Within the rift valley

☐ Areas of volcanic activity   (any 3x1=3mks) c)

A: Epicentre

B: Seismic focus

d) Ways in which the earth‟s crust is affected by earthquakes

☐ Earthquakes trigger off landslides which in turn can block rivers resulting in diversion of drainage or formation of lakes.

☐ They can cause the raising or lowering of the sea floor.

☐ They can lead to shearing of rocks, resulting in horizontal displacement of rocks.

☐ They can cause tsunamis which can submerge coastal regions.

☐ They trigger off faulting and volcanism.   (any

5x1=5mks) e) i) What is natural vegetation
(2mks)
This is the plant cover that grows on the earth‟s surface on its own, without interference by people or their animals. ii) Two climatic factors which influence he distribution of vegetation.

☐ Sunlight (solar radiation) that green plants can utilize will set the limit for the maximum quantity of plant growth and production.

☐ Precipitation areas that receive heavy and reliable rainfall have luxuriant vegetation growth.

□

Temperature-each plant species require specific temperature

□ Wind   (any 2x1= 2mks) iii)
        State six characteristics of the tropical rainforest.

□ There is scanty undergrowth
□ The tall trees have buttress roots
□ Lianas creep on the trees especially those of middle canopy
□ Most trees have broad leaves
□ The forest is evergreen
□ The trees grow closely together
□ The forest has three distinct canopies
□ Most trees are hardwoods
□ The trees species include mahogany, ebony, ironwood, rosewood etc
□ The trees of the middle canopy reach up to 30m in height   (any 6x1=6 mks)

8. a)
    i) Underground water-is all the water which exists below the surface of the earth ii)
    Factors which affect occurrence of underground water.

□ The level of saturation of the ground
□ Evapotranspiration
□ The slope of the land   (3x1= 3mks) iii)
    Location of an artisan well

□ The mouth of the well must be lower than the intake area to ensure water comes out of the well on its own.
□ The aquifer must lie between impermeable rocks so as to be able to retain water
□ The aquifer must outcrop in a region which is a source of water, like any rainy area or beneath a lake.
□ The aquifer must dip from a region of water intake and form a broad syncline.   (4x1=4mks) b) i)
    Formation of features in limestone area.

□ The water table in the rocks should be deep below the surface.
□ Rainfall should be moderate to high
□ The surface rock and the rock beneath the surface should be thick limestone, diatomite or chalk.
□ The rock should be hard and well jointed.
□ The climate should be warm or hot.   (any 3x1=3mks)

    ii)   Diagram
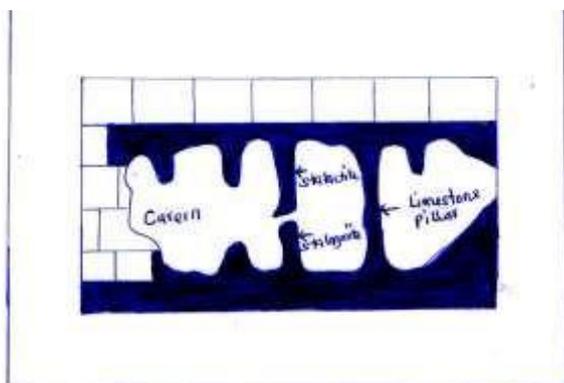
□ Stalactites are underground finger like masses of calcite formed through deposition of drops of water containing calcium bicarbonate which have seeped through cravies and joints-on the roof of a cavern
□ Stalagmites are underground stumpy rock mass which grow from the floor of the cave upwards when water drips from the end of the stalactite to the floor where they crystallisse and grow slowly but steadily towards the roof.
□ Limestone pillar forms when stalagmites grow up to reach the roof of a cavern.
        Drawing 3mks

      Explanation 3mks

      Total 6mks

c) Hypotheses

    i) There is a relationship between the resultant features and settlement distribution ii)
There are no surface rivers in the limestone area. (any 2x1=2mks) iii) Surface features

      a. Swallow holes/sink holes

      b. Dolines

      c. Uvalas

      d. Polje

      e. Grikes and clints

  i)   Problems

  ii)   Accidents may occur

  iii)   Unfavourable weather

  iv)   Sickness   (any 2x1=2mks)

9.

    i)   Wadis

☐   There are steep dry hollows or ravines in arid areas formed when flash floods occur on a steep and undulating landscape.

☐   The flash cut rills, which in turn develop into gullies.

☐   The streams enlarge the gullies rapidly to produce steep sided valleys called wadis.

    ii) Pediplain/pediplane

☐   It is steep surface feature which result from the coalescence of several large scale adjacent pediment.

☐   They are formed as a resultofwidespread surface water erosion on the surface of the surface arid area.

    iii) Bajada/ bahada

☐   It is a continuous gentle sloping fringe of angular scree, gravel and coarse sand around the margins of an inland basin in a desert landscape.

☐   It can also be formed along the base of a mountain range in a semi-arid area. a) Negative impacts of desert landforms

☐   They can inhibit physical development in an area

☐   Sand dunes migration may destroy rich agricultural farms and threaten human and animal life.

☐   Water in oases may habour vector borne diseases   (any 3x1=3mks) b)

    i)   Micro-climate-is the climate of the immediate surroundings of some phenomena on the surface of the earth. (2mks) ii)

☐   Dammed areas

☐   Heavily built areas

☐   Forested areas   (3x1=3mks)

    iii)

☐   The global warming due to increase of greenhouse gases will lead to climatic change.

☐   Problems such as desertification and soil erosion are likely to increase.

☐   Sea levels rise causing flooding along the coastal regions

☐   Possible rise in temperature and increase in evaporation rates may lead to increased rainfall in some areas. ☐ A change in climate is likely to lead to the disruption of the natural ecosystems

☐   Possible droughts might increase in china, Africa and dry lands of Brazil Australia and India (any4x1=4mks) c)

    i)   Hot desert vegetation

    Scarce vegetation cover, varying from short bushes to bare sand grounds

    Xerophytic plants of various types survive in this area

    Deciduous bushes and shrubs like acacia are common

    Salt-tolerant plants (halophytes) grow in areas with poor drainage, saline and alkaline soils.

    Stomata of the leaves of these plants are protected from excessive exposure to evaporation by being sunk in pits below the level of the leaf surface by hairy leaves.

□
  Small leaved plants.   (any 4x1=4mks) ii)
  Zones of temperate grasslands
- □ The praires of north America
- □ The pampas of Argentina
- □ The veld of South Africa
- □ The downs of Australia and Newzealand.   (any

3x1=3mks)

10.   a)
      i) Divide/ watershed
- □ This is ridge line (boundary line) separating drainage basins or river systems   (1mk) ii) Confluence
  This is the point a tributary joins the main river.
          (1mk) b) Factors affecting the rate of river erosion
- □ A large volume of water increases the ability of the river to erode-by corrosion, hydraulic action and solution.
- □ Steep gradient encourages water to flow at high velocity which gives it greater force and energy to erode.
- □ If the rock over which the river is flowing has little resistance to erosion and if it contains soluble minerals it can easily be eroded.
- □ Large and hard rock materials cause more erosion by corrosion than small and light particles.
- □ A river carrying a large load and flowing at a high velocity will be more effective in eroding the channel than if the load is in small amounts (any 3x1=3mks)

c) i)   River capture and river rejuvenation
        River capture is the diversion of some water or parts of ales powerful river into a more powerful river in the adjacent valley while river rejuvenation is a renewal or revival of a rivers erosive activity. (2mks)
      ii) Factors influencing river capture
- □ The powerful river(pirate/consequent river) and misfit must flow adjacent in valleys.
- □ The pirate river should have a wider valley than misfit
- □ The pirate river must have more active head-ward erosion than neighbouring river.
- □ The pirate river ought to be flowing at a lower level.   (any 3x1=3mks) d)

Characteristics of a river at a mature stage.
- □ The river channel becomes wider because it is joined by many tributaries from upstream.
- □ The valleys are flat and large.
- □ The slope becomes gentler.   (any 3x1=3mks) e)
      i) Two types of lacustrine/ coastal delta
- □ Arcuate
- □ Birds food
- □ Estuarine
      ii) Conditions influencing the formation of a delta,

□   The deposition of sediments should be faster than the rate at which the sediments are removed by sea currents and tides.
- □ The shore around the river mouth should be shallow to facilitate faster deposition
- □ The rivers coarse should be free from obstacles
- □ The river should be slow-flowing at the mouth
- □ The river must be carrying a large load of sediments which it would deposit at the mouth f)
      i) Abrasion/corrosion (2mks)
- □ The river-water picks up the rock waste and uses it to grind the rocks of its bed

□   As these particles are moved downstream they abrade/corrode the river bed by swirling fragments in the hollows in the bedrock.
- □ These hollows are deepened by corrosion to form pot holes.
- □ This process loosens and weakness the rocks along the river channel.

ii) Hydraulic action
□ Water hits against the banks of the river channel
□ The water is forced in to the cracks on the river banks
□ Some air in the cracks is trapped and compressed
□ The compressed air develops high pressure which widens cracks
□ As the water retreats, pressure in the cracks suddenly released
□ As repeated compression and widening of the cracks eventually shatters the rocks.
□ As the water retreats, it carries away the loose particles
□ The force of moving water and the eddying effect sweep away loose materials in the river channel. g) Negative effects of rivers
□ Where the river water is almost stationary, many water borne diseases are a problem to people
□ Some rivers form barriers between communities making communication difficult
□ During river flooding a lot of property and human lives are lost e.g. rivers on kano plains like Nyando and lower Tana

KURIA EAST DISTRICT JOINT EXAMINATION COUNCIL
GEOGRAPHY 312/2
PAPER 2
MARKING SCHEME

SECTION A
Answer all the questions in this section
1.
a) Name two conditions that favour the growth of hard wood forest   (2mks)
□ High rainfall/of about 2000mm a year
□ High temperatures of about 20^0c-30^0c
□ High relative humidity
□ Deep well drained fertile soil
□ Low latitude
b) Outline three exotic of soft wood forests in Kenya.   (3mks)
□ Trees are conical in shape
□ Trees occur in pure strands
□ Trees grow tall and have straight trunks
□ Trees have needle like leaves
□ Trees bear cones
□ Trees are ever green
□ Trees have no undergrowth
2.
(a) Distinguish between national park and game reserve   (2mks)
   National parks are exclusively meant for wildlife conservation whereas game reserves are for wildlife conservation and allows human activities.
b) Give three benefits of eco-tourism □
Ensure that poaching is minimized
□ Stimulates thev development of the area within the park
□ Encourages domestic tourism.
3.
a) What is communication?   (2mks)
   Communication is the process of transferring information between two or more persons/places.
b) Name any three modes of modern communication   (3mks)

- ☐
  - ☐ radio/television
  - ☐ Telephone/mobile
  - ☐ News paper or magazine
  - ☐ Postal/counter services
  - ☐ Facsimile
  - ☐ Internet

4
a) Below is a sketch map showing part of the great lakes and St. Lawrence Sea way. Use it to answer questions a) See map on the question paper. Name:

Name:-

i) The port marked P-Quebec ii) The canal marked Q –New York
state Barge canal. Erie canal iii) The lake marked B –lake Ontario

b) Name three ways in which the Great lakes and St. Lawrence sea way has contributed to the growth of   industries in the region.
- ☐ It has increased (internal and external) trade
- ☐ It has facilitated the transportation of bulky products
- ☐ It has reduced the cost of transportation of bulky products ☐ The dams along the sea way provide HEP for industrial use.
- ☐ It has led to the development of lake ports and towns which provide marked /labour housing facilities 5. a)
  Apart from HIV And AIDs, give two other causes of mortality in East Africa. ☐ Natural calamities
- ☐ Low nutritional standards /famine
- ☐ Conflicts /war
  Other epidemics/ diseases
- ☐ Inadequate medical facilities /poor medical facilities
- ☐ Road carnage   (2x1=2mks)

b) State two ways in which the spread of HIV and AIDS in Kenya may slow down economic development.
- ☐ The sickness leads to absenteeism from work /reduced production.
- ☐ Money spend in treating the sick could be used for other economic activities.
- ☐ Death resulting from disease leads to loss of economically productive population.
- ☐ Care takers at family level use more time caring for the sick /orphans instead of engaging in economic activities/high dependency ration.   (2x1=2mks)

SECTION B
QUESTION 6 COMPULSORY

6. See table on the question paper
a) Use a radius of 5cm draw a pie chart to represent data on exports .Shown on the table on the question paper.(showb your calculation)

A PIE CHART REPRESENTING KENYA"S EXPORT IN 2009
Calculation
Food, Beverages and Tobacco
$\frac{3270,000,000}{580,0000,000}$ x 360 ^{0} = 202.96^0
Basic materials, mineral fuels and lubricants
$= \frac{1100,000,000}{5800,000,000}$ x 360^0 = 68.27^0
Manufactured goods
$= \frac{1400,000,000}{5800,000,000}$ = 86.89^0
Miscellaneous

$$= \frac{30,000,000}{5800,000,000} = 18.6^0$$
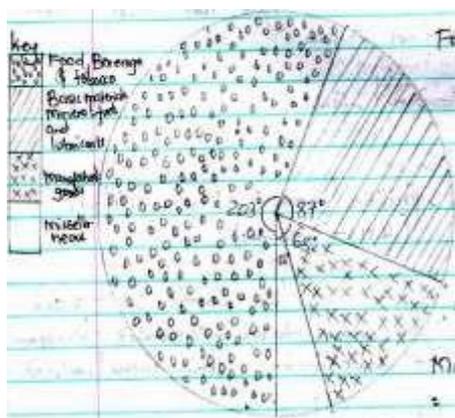
b) Explain four measures which Kenya may take to reduce the unfavorable balance of trade.8mks

☐ Encourage development of Jua Kali industries which do not require importation of heavy machinery /so that Kenya is also able to export.

☐ Restricting the importation of luxury items thorough taxation.

☐ Establishing /providing import substitution industries to cut down on importation of some commodities.

☐ Developing alternative sources of energy in order to reduce importation of fuel /petroleum

☐ Encourage the production of high quality manufactured goods for export in order to earn higher income high prices /production of high quality agricultural products.

☐ Diversifying the agricultural export base to enable the country to have a variety of exports ☐ Opening new markets to avoid dependence on the traditional partners.

☐ Popularizing trade to increase earning from the invisible trade.

c) Explain four benefits that Kenya derives from international trade.

☐ The imported industrial inputs have led to the growth of manufacturing industries in the country

☐ Demand for Kenya‟s export have led to the expansion of the industries that produce those goods.

☐ Transport and communication network in Kenya has been improved to facilitate the movement of trade goods /modernization of the facilities for handling goods at the port of Mombasa.

☐ Taxation of commodities and services rendered has generated revenue for the country.

☐ Employment opportunities have been created in the manufacturing service industries that handle imports and exports.

☐ Trade has enhanced cooperation between Kenya and trading partners.

☐ Trade encourages speciali8sation which leads to production of high quality goods in some industries in Kenya, thus enabling the country to earn higher income.

☐ Kenya is able to import what it needs from other countries to satisfy her people.

☐ Kenya gets a ready market for its surplus goods

☐ Kenya has foreign exchange which enables it to import goods from other countries /credit foreign exchange.

7 a)   i)   What is a game sanctuary?

A game sanctuary refers to an area that has been set aside for the protection of birds or other kinds of animals (endangered animals)

1mk ii) Name three game sanctuaries in Kenya

☐ Lake Nakuru National sanctuary (flamingoes and pelicans)

☐ Ngulia Rhino sanctuary

☐ Maralal National sanctuary

☐ Lewa Down sanctuary near Isiolo

☐ Ol Ari Nyiro sanctuary

□

b) Discuss five ways in which wildlife is of significance to East Africa

□ Wildlife is a natural beauty and hence attracts tourists from within and outside the country and pay fee to see them.

□ Wildlife conservation employs a large number of personnel who are able to earn their living .

□ Preservation of flora and fauna especially forests also help tom preserve and protect water catchment areas □ wildlife provides scientists with a filed in which they study and carry out research.

□ Wildlife conservation in some areas is a valuable economic utilization of marginal areas with low and unreliable rainfall and where crop growing is difficult.

□ Conservation and preservation of wildlife is important of its aesthetic value.

□ Some communities e.g Ogiek and pygmies live in wild and depend on wild plants and animals for food and shelter.

c) Explain three problems facing wildlife in Kenya

□ Poaching: The number of certain animals" species has declined over the years due to poaching e.g Rhino and elephants.

□ Wildlife human conflicts especially where people live near the game reserves .Wild animals invade people"s farm and destroy their crops.

□ Overgrazing –common where the population of grazers and browsers is high.

□ Bush fire-These destroy large tracks of vegetation

□ Adverse climatic conditions These are responsible for the destruction of vegetation and death of many animals.

□ Pests and diseases- These interfere with their health and at times leads to death eg Foot and mouth   disease(factor /explanation)

d) Distinguish between management and conservation of wildlife.
Management of wildlife refers to the effective planning and control of wildlife while conservation refers to the protection of both flora and fauna against interference and destruction by people.

e) Outline three conservation measures taken to protect flora and fauna in Kenya 3mks

□ Establishment of Game reserves, National parks and game sanctuaries

□ Ban on Game hunting

□ Establishment of Game Ranches

□ Creation of anti-poaching units

□ Protection of endangered species

□ Non –governmental initiatives.

8.a)   i)   Three areas where cocoa is grown in Ghana 3mks
    Kumasi   Takoradi   Accra

   ii) Four physical conditions necessary for cocoa growing

□ High temperature 24^0C-30^0C

□ High rainfall of about 1200-1500mm and well distributed throughout the year.

- ☐ Low altitude /low land
- ☐ Deep and well drained loam soil
- ☐ High relative humidity (70-80)
- ☐ Undulating land /gentle sloping land ☐   shade from strong sun rays
- ☐ Shelter from strong winds.

b) Cocoa processing from harvesting to marketing ☐
Pods are harvested using long sharp knives.
- ☐ Pods are collected and piled at a central place
- ☐ They are split open with a knife and beans scooped out by hand.
- ☐ Beans are heaped on mats and covered for 5-6 days during which the juicy pulp drains way.
- ☐ Beans are washed spread on table to dry
- ☐ They are turned frequently to dry and slowly turns brown.
- ☐ Dry beans are sorted out
- ☐ Dry beans packed and transported to buying centers
- ☐ At the buying centers the beans are weighed and graded for marketing.   Max 8x1=8mks
- ☐ NB- Sequence must be followed for the student to score. c) Problems experienced by cocoa farmers.
- ☐ Attack by pests and diseases e.g mealy bugs swollen shoots, black pod disease which destroy crops lowers yield.
- ☐ Fluctuation of world markets cocoa prices that discourage farmers.
- ☐ Low prices discourages farmers leading to low production.
- ☐ Strong Harmattan wind destroy cocoa pods thus loss to the farmers.
- ☐ Inadequate labour during harvesting resulting ton delay in harvesting /lower the quality /increase the costs of production.
- ☐ Poor roads /muddy this leads to high costs of production /lowers profit /lowering the quality. 3x2=6mks NB-Problem and explanation must come out clearly to score.

d) Uses of oil palm
- ☐ Palm oil is used for making cosmetics soaps candles and margarine ☐   Stems are used as poles for building – ☐ Leaves are used for roofing.
- ☐ Leaves are used to make baskets /hats/brooms.
- ☐ Shell/fibre are used as fuel
- ☐ Sap from them stem is used to make wine.
- ☐ Crushed not /kernels are used as animal feeds fertilizers.
        NB-No mark without part mentioning   (4x1=4mks)

9.a) Describe the characteristics of the population represented by the pyramid   (8mks)
- ☐ From 0-14 years the population is low
- ☐ 15-44 years the population is high
- ☐ The ageing population is large
- ☐ The product
- ☐ The productive group of the population is large
- ☐ The population has high life expectancy
- ☐ The dependency ratio is low ☐ The population growth rate is low

b) i) State three reasons why it is necessary for a country to carry out population census.   3mks
- ☐ For planning
- ☐ To help in the distribution of resources
- ☐ To make estimates of population growth e.g through migration
- ☐ To identify the rates of death and births
- ☐ To help the government in decision makin-Determi8ning the administration boundaries.

ii) Explain how the following factors have led to the population increase in Kenya
        Early marriages
People who marry early are likely to get more children because they have a long period during which they can get children.
Improved medical facilities2mks
Both the child mother and general population haven better chances of survival because of the available medical facilities the country is able to control the spread of diseases and have ability to cure diseases thus leading to high survival rates.
Cultural belief   2mks

Prevalence for a particular sex naming children were seen as a source of wealthy polygamy.

c) Your class intends to carry out a field study on population around the school.

    i) State two reasons for reconnaissance survey

- Held to design working schedule
- Helps to estimate the cost of study
- Helps for identity methods of data collection
- Helps to identify the likely problems faced

And any other relevant point first   2x1=2mks ii) what

advice would you give to the government to curb child mortality

- Constructing more health centers
- Intensify immunization and vaccination exercise
- Educating parents on nutritional values.   First 2x1=2mks iii)

    State two ways in which you might have collected your data.

- Interviewing
- Administering questionnaires
- Video taping
- Tape recording   First 2x1=2mks

10a) i). Define the term pollution

    Pollution is the emission of solid, liquid and gaseous wastes to the environment which contaminates water, soil and air.

    ii) State four causes of land pollution

- Dumping of garbage particularly in urban centers/lack of dustbins to put wastes.
- Industrial waste dumping
- Poor sanitation and disposal; of human waste
- Poor excessive use of farm chemicals
- Burning of for4ests
- Mining quarrying of land dereliction.   First 4x1=4mks

b) i) Name two areas in Kenya which occasionally experience flooding 2mks

    Budalangi

    Nyando

    Kano plains

    Tana River County /Lower Tana. ii) Explain three major

causes of widespread flooding in Kenya

- Blockage of drainage in urban centers
- Siltation of rivers and lakes making them shallow
- Heavy rainfall in adjacent highlands leading to flooding in lowland.
- Landslide blocking a river leading to flooding. iii) State four methods used in controlling and managing floods in Kenya.
- Construction of dams/check dams to reduce water velocity and water volume downstream.
- Construction of dykes along rivers.
- Building artificial levees to keep water in the main river channel.
- Planting trees /vegetation cover in water catchment areas to increase infiltration/reduce runoff.
- Construction of diversion canals to straighten meanders for smooth water flow.
- Regular dredging of river channels to remove silt /deepen channel to hold more water.   First 4x1=4mks

c) i) State three problems caused by lighting   3mks

- Loss of human and animal lives
- Causes fire that destroy forests
- Damage houses and property
- Disrupts power and communication facilities.
- Causes panic and shock to people

ii) Give four measures used to control and manage lighting in Kenya.4mks

- Installation of lighting arresters on building
- Discourage people from sheltering under trees when raining.
- Use aircraft to spray carbon (IV) oxide or silver iodide to disperse clouds reducing formation of lighting cloud seeding.

☐ Encourage public awareness and campaigns on the effects and control of lighting.

☐ Use of early warning systems e.g radars they detect lighting before it strikes.

MOKASA JOINT EXAMINATION
**Kenya Certificate of Secondary Education**
312/1
Paper 1
GEOGRAPHY

SECTION A

*Answer **all** the questions in this section*

1.   (a) What is the relationship between Geography and Chemistry?   (2 marks)

        (b)   The diagram below shows the internal structure of the earth.
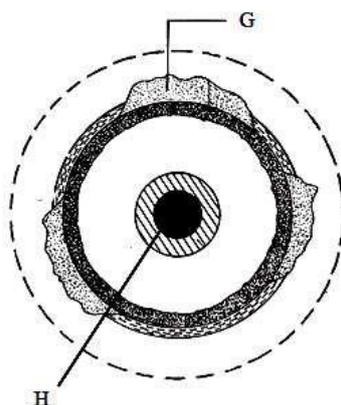
                (i)Name the parts marked **G** and **H**.   (2 marks)

                (ii)Name the dominant mineral in the mantle.   (1 mark)

2.   (a) Differentiate between absolute and relative humidity.   (2 marks) (b) State the significance of humidity in the atmosphere.   (3 marks)

3.   The diagram below shows some features formed by faulting.   (2 marks)
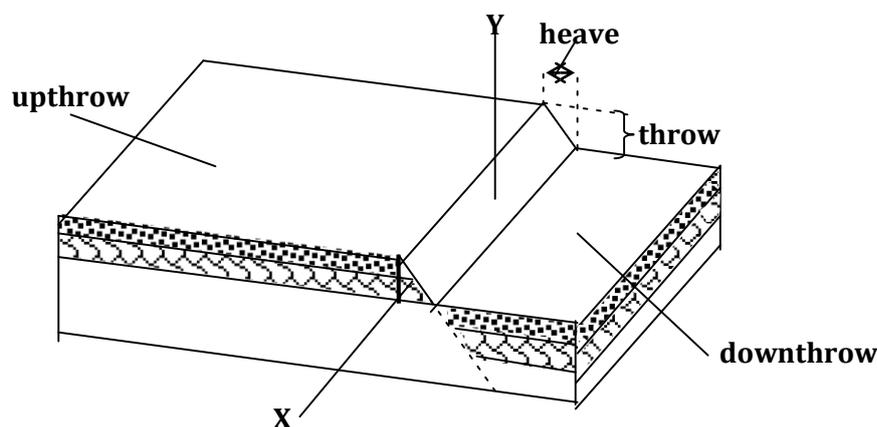
(a) Name the parts marked **X** and **Y**. (2 marks)

(b) State *three* effects of faulting on drainage of an area. (3 marks)

4. (a) Identify *two* scales used to measure the intensity of an earthquake. (2 marks) (b) Give *three* major earthquake zones of the world. (3 marks)

5. (a) State *two* ways in which plants cause weathering. (2 marks)

(b) Describe the process of weathering through oxidation. (3 marks)

SECTION B

Answer question 6 and any other TWO questions from this section

6. Study the map of Migwani 1:50,000 (sheet 151/1) provided and answer the followingquestions.

(a) (i) What is the altitude of the lowest contour shown on the map? (1 mark)

(ii) Give the six-figure grid reference of Mboni dam. (2 marks)

(iii) What is the length in Kilometres of the All Weather Road Bound Surface C94 from the junction with the Dry Weather Road D502 to Northing 84? (2 marks)

(b) Draw a rectangle measuring 10 cm by 8 cm to represent the area enclosed by Eastings 90 and 00 and Northings 62 and 70. (1 mark)

On the rectangle, mark and name the following features:

a. Musengo school

b. Road E742

c. Kitui Hills (3 marks)

(c) (i) Citing evidence from the map, identify *four* social services offered in Mutitu (Ndooa) township. (4 marks)

(ii) Describe the relief of the area covered by the map. (6 marks)

(d) Describe the characteristics of the long profile of river Ikoo. (6 marks)

7. (a) (i) Describe the following characteristics of minerals:

• Texture (1 mark)

• Tenacity (1 mark)

(ii) Describe how extrusive igneous rocks are formed. (4 marks)

(b) For each of the following rocks, name the resultant rock that forms after metamorphism.

i) Sandstone (1 mark) ii) Limestone (1 mark) iii) Granite (1 mark)

(c) Explain *three* economic significance of rocks in Kenya. (3 marks)

(d) Students carried out a field study on rocks around their school.

i) State *two* importance of stating the objectives for their study. (2 marks) ii) Give *three* reasons why theyprepared a route map of the study area. (3 marks) iii) Give *three* activities that the students were involved in during the field study. (3 marks)

8. (a) (i) What is an orogeny? (2 marks)

(ii) Give *two* factors that influence the folding process of rocks. (2 marks)

(b)The diagram below shows some types of folds. Use it to answer the question(i) and (ii).
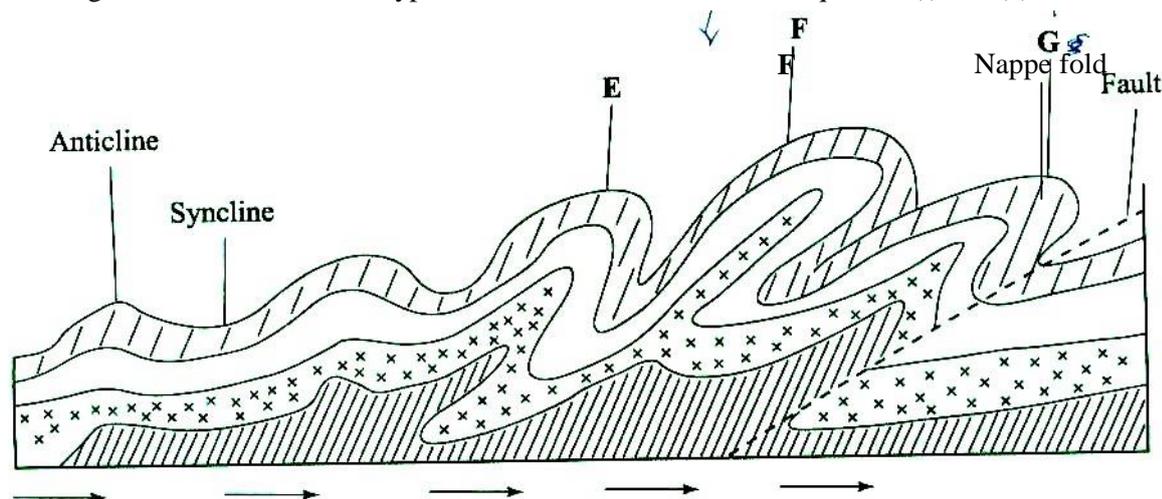
(i)Name the types of folds marked **E** and **F**.   (2 marks)
 (ii)Describe how an overthrust fold is formed.   (4 marks)
        (c) Name the countries in which the following fold mountains are found.
    i) Atlas   (1 mark) ii) Alps   (1 mark) iii) Himalayas   (1 mark) iv) Andes   (1 mark)
 (d) (i)Apart from fold mountains, name *three* other features resulting from folding.   (3 marks)
        (ii)Explain *four* ways in which fold mountains influence climate.   (8 marks)
9.   (a)(i)Differentiate between a marine delta and a Lacustrine delta.   (2 marks)
(ii)Explain *three* conditions necessary for the formation of a delta.   (6 marks)
(iii)State *three* significance of deltas to man.   (3 marks)
(b)(i)What is a braided channel?   (2 marks)
(ii)State *four* conditions necessary for the formation of a braided channel.   (4 marks)
(c) With the aid of well labelled diagrams, describe how an ox-bow lake is formed.   (8 marks)
10.   (a) What is Karst scenery?   (2 marks)
        (b)   State *four* factors which influence the development of a karst landforms.   (4 marks) (c) The diagram
        below shows a feature in a Karst landscape. Use it to answer question (i) and (ii).
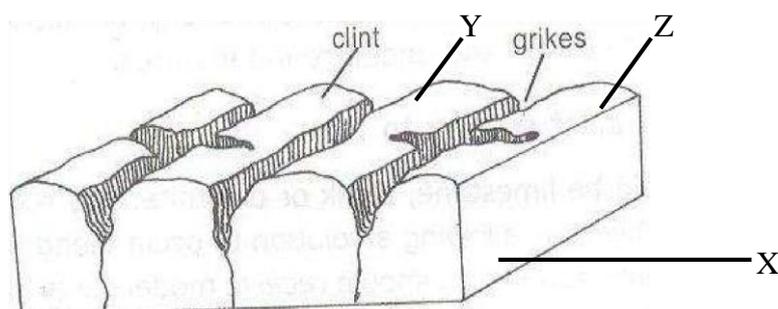
 (i)Name the parts marked **X, Y** and **Z**.   (3 marks)
 (ii)Describe how the features marked **Y** and **Z**are formed.   (5 marks)
(d)(i)Define a lake.   (2 marks)
        (ii)Name *two* types of lakes which are formed by volcanic activity.   (2 marks)
        (iii)State *three* reasons why some lakes are salty.   (3 marks)
        (iv)Explain*four*ways in which lakes are of significance to human activities.   (4 marks)

MOKASA JOINT EVALUATION EXAMINATION
Kenya Certificate of Secondary Education (K.C.S.E)
312/2
GEOGRAPHY
Paper 2

SECTION A:
*Answer **ALL** the questions in this section.*

1.   a) State **two** ways in which minerals occur   (2 marks) b) Describe panning as a method of mining   (3 marks)

2.   a) Differentiate between a Forest and forestry   (2 marks) b) Give **three** characteristics of Tropical hard-wood forest   (3 marks)

3.   a) Name **two** main rivers which supply water to Mwea-Tebere irrigation scheme   (2 marks) b) State **three** environmental problems faced by farmers in Mwea-Tebere irrigation scheme (3 marks)

4.   a) Give **two** methods used to rehabilitate land in Kenya   (2 marks) b) State **three** benefits of Perkerra Irrigation scheme   (3 marks)

5.   a) What is a game sanctuary   (2 marks) b) State **three** reasons for encouraging domestic tourism in Kenya   (3 marks) **SECTION B:**
*Answer question **6** and any other **TWO** questions from this section*

6.   Study the photograph below and use it to answer question (a)

a)   (i)   Name the type of photograph shown above   (1 mark)
     (ii) What time of the day was the photograph taken if the camera was held facing South?   (1 mark)
iii) Draw a rectangle measuring 16cm by 9cm to represent the area of the photograph. On it sketch and label the main features shown on the photograph   (5 marks) iv) Describe the landscape of the area represented by the photograph.   (3 marks) b) (i) Identify **two** counties in the Rift Valley where ranching is practiced.   (2 marks)
     (ii) Name **one** exotic breed of beef cattle reared in Kenya   (1 mark)
c)   State **four** physical factors which favour beef farming in Argentina   (4 marks)
d)   Explain **four** benefits of beef farming to the economy of Argentina   (8 marks)

7.   a) Define agro-forestry   (2 marks) b) State **three** benefits of agro-forestry   (3 marks)
     c)   i)Explain how the following factors have influenced distribution of natural forests in Kenya
     •   Aspect   (2 marks)
     •   Soils   (2 marks) ii)Explain **four** ways of managing forests in Kenya   (8 marks)
     d)   Compare softwood forestry in Kenya and Canada under the following sub-headings
     •   Transportation   (2 marks)

•   Harvesting   (2 marks)

•   Climate   (2 marks)

•   Distribution   (2 marks)

8. a) What is mixed farming? (2 marks) b) State **three** economic factors influencing agriculture (3 marks)

    c) i)Give **four** physical factors influencing coffee growing in Kenya (4 marks)

           ii)Describe coffee productions in Kenya from harvesting to marketing

      (8 marks)   iii)Give **three** differences between coffee farming in Kenya and Brazil

         (6 marks)

    d) You intend to carry out a field study on coffee growing in a farm near your school. State **two** disadvantages of using secondary data during data collection
        (2 marks)

9. Use the map of North America below to answer questions (a) and (b)
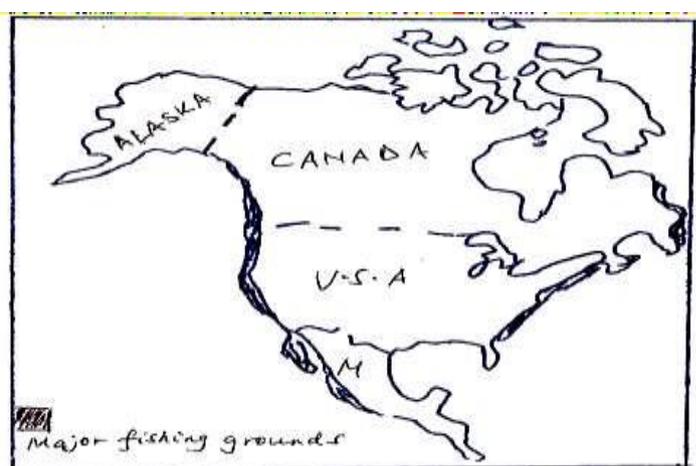
a) Name

(i) The fishing ground shaded (1 mark)

(ii) The ocean current marked (b) (1 mark)

b) Explain **four** physical conditions necessary for fishing in the fishing ground shaded. (8 marks)

c) Describe trawling method of fishing (6 marks)

d) i)Explain **three** ways in which overfishing can be controlled in Lake Naivasha (6 marks) ii)State **three** significance of fish farming (3 marks)

10. a) i)Apart from coal, name three other non-renewable sources of energy (3 marks)
ii)State **four** reasons why there has been a decline in the use of coal as a source of energy (4 marks)
    iii)Give **three** advantages of using wind energy (3 marks)   b)
Name **two** examples of agricultural non-food processing industries in Kenya (2 marks)

    c) Below is a sketch map of the Ruhr Industrial Region. Use it to answer question (i)
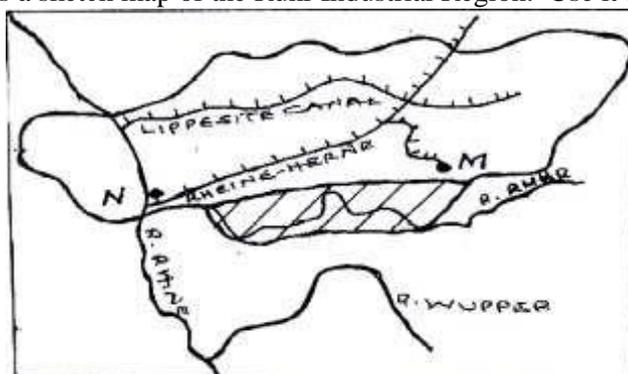
(i) Name:

☐   The canal market U   (1 mark)

☐   The river marked V   (1 mark)

☐   The town marked W   (1 mark)

(ii) Explain **three** factors which led to the growth of iron and steel industry in the Ruhr region of Germany

(6 marks)

e) Explain **two** environmental problems which have resulted from the development of car manufacturing industry in Japan   (4 marks)

MOKASA JOINT EXAMINATION
Kenya Certificate of Secondary Education
312/1
Paper 1
GEOGRAPHY
MARKING SCHEME
SECTION A

*Answer **all** the questions in this section.*

1. (a)What is the relationship between Geography and Chemistry?   (2 marks)

☐   *Geography applies Chemistry concepts in studying the chemical composition of rocks and soils.*

☐   *Chemistry concepts are used in Geography to explain chemical changes that occur in rocks/soils.*

(b)

(i)Name the parts marked **G** and **H**.   (2 marks)

G -*Continental crust/sial* H -
Inner core

(ii)Name the dominant mineral in the mantle.   (1 mark)

☐   *Olivine/ ferromagnesian silicate*

2. (a)Differentiate between absolute and relative humidity.   (2 marks)

☐   Absolute humidity is the actual amount of water vapour or moisture in a given mass of air at a particular temperature while relative humidity is the ratio of the absolute humidity of a given mass of air to the maximum amount of moisture that this mass of air could hold at the same temperature.

(b)State the significance of humidity in the atmosphere.   (3 marks)

☐   The amount of water vapour in a given volume of air indicates the   atmospheres potential capacity to hold moisture: It determines the amount of precipitation that a given area is likely to receive.

☐   Water vapour is important in absorbing radiation hence regulates the heat loss from the earth.

☐   The amount of water vapour determines the amount of energy stored in the atmosphere for the development of storms.

3. (a)Name the parts marked **X** and **Y**.   (2 marks)

X   -   *Hade*
Y   -   *Fault scarp/escarpment/scarp face.*

(b)State *three* effects of faulting on drainage of an area.   (3 marks)

☐   Down warping due to faulting may lead to formation of depressions which may be filled by water to form lakes.

☐   Fault lines due to fracturing of crustal rocks may change the course of river making the river to start flowing a long the fault line forming faulting guided drainage pattern.

☐   Fault scarps forming across rivers course may lead to formation of waterfalls.

☐   Faulting may lead to formation of lines of weakness in earth‟s crust which becomes passages for hot water from the underground to the earth‟s surface to form hot springs and geysers.

4. (a) Identify *two* scales used to measure the intensity of an earthquake.   (2 marks)

☐   Rossi forell scale

☐   Mercalli scale

(b) Give **three** major earthquake zones of the world.   (3 marks)

☐   The mid-Atlantic

☐   The Great Rift Valley region

- The Mediterranean region/Tethyan
- The circum Pacific region
- West coast of South America/ the Andes region
- West coast of N. America/Rockies region
- Himalayas belt

5. (a) State **two** ways in which plants cause weathering. (2 marks)

- Plant roots grow into the joints and cracks of rocks widening the joints and cracks and with time they cause rock blocks to separate and break away.
- The widening of joints and cracks provide space and passage for moisture   and air to penetrate deeper into the rocks facilitating hydrolysis and solution weathering process.
- Plants rot on rocks in the presence of moisture producing organic acids which react with some of minerals within the rock causing it to decay.
- Mosses and Lichens that grow on a rock cause the rock to be moist, facilitating chemical weathering process to take place.

(b) Describe the process of weathering through oxidation.   (3 marks)
☐ Rocks with iron mineral combined with oxygen/ oxidized to form a new mineral. The new rock formed easily crumbles.
☐ Ferrous oxide is oxidized to ferric oxide which is reddish brown in colour which easily crumbles.
   SECTION B
   *Answer question **6** and any other **TWO** questions from this section.*
6. Study the map of Migwani 1:50,000 (sheet 151/1) provided and answer the following questions.
   (a) (i)   What is the altitude of the lowest contour shown on the map?   (1 mark) *660m*
               (ii)Give the six-figure grid reference of Mboni dam.   (2 marks)
☐   *073784*
  (iii)What is the length in Kilometres of the All Weather Road Bound Surface C94 from the junction with the Dry Weather Road D502 to Northing 84?   (2 marks)
☐   *5.6 km*
   (b) Draw a rectangle measuring 10 cm by 8 cm to represent the area enclosed by Eastings 90 and 00 and Northings 62 and 70.   (1 mark)
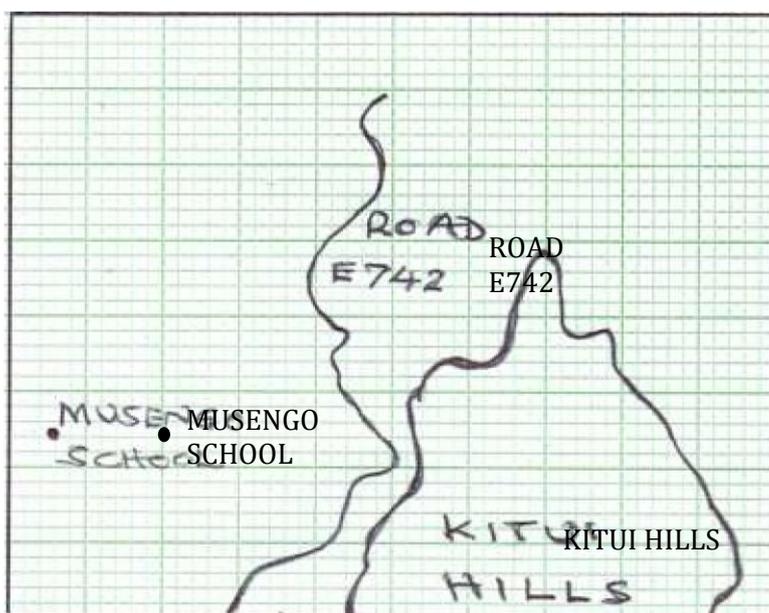
   On the rectangle, mark and name the following features:
   i)   Musengo school
   ii)   Road E742
   iii)   Kitui Hills   (3 marks)
   (c) (i)Citing evidence from the map, identify *four* social services offered in Mutitu (Ndooa) township. (4 marks)

Services	Evidence
- *Health/medical services*	- *Health centre*
- *Administration services*	- *Court house/Chief's office*
- *Water supply services*	- *Pipeline/water tank*
- *Education services*	- *School*
- *Housing services*	- *Built up area/huts*

☐

(ii) Describe the relief of the area covered by the map.   (6 marks)

▢ The lowest altitude is 660m/ the highest altitude is 1515m above sea level.

▢   The land rises from the East to the West.

▢   To the east of Easting 08, the landscape is generally hilly/has many hills. ▢ There are many interlocking spurs along river valleys ▢ There are some abroad valleys in the South East.

▢   The landscape is dissected by river valleys.

   There are many narrow river valleys in the highlands.

▢   The land is gently sloping in the east.

▢   There are steep slopes in the hilly areas/ to the West.

▢   Some areas in the east are flat.

▢   There are ridges in the central and South Western part.

   (d) Describe the characteristics of the long profile of river Ikoo. (6 marks) ▢ River Ikoo flows to the South East.

▢   The river has many meanders

▢   The river becomes wider from grid square 0769.

▢   There are interlocking spurs along the course of the river.

▢   The river has many small tributaries that form a dendritic pattern along the course.

▢   Some parts of the long profile have a steep gradient. ▢ There are sand/mud deposits downstream

▢   The river is permanent.

7. (a) (i)   Describe the following characteristics of minerals:

▢   Texture   (1 mark)

▢ *The sizes and shapes of individual mineral particles vary/differs.*

▢   Tenacity   (1 mark)

▢ *The ability of a mineral to resist/to withstand tearing, crushing or breaking differs/vary.*

   (ii)   Describe how extrusive igneous rocks are formed.   (4 marks)

▢   During volacanic eruptions, lava and other volcanic materials thrown on to the earth"s surface. The lava cools and solidify to form   extrusive/volcanic igneous rocks. The rate of cooling and   solidification is very rapid due to presence of low temperature such that the rocks formed will have minerals with fine textured and small crystals.

   (b) For each of the following rocks, name the resultant rock that forms after metamorphism.

   (i)   Sandstone   -   *Quartzite*   (1 mark)

   (ii)   Limestone   -   *Marble*   (1 mark)

   (iii)   Granite -   *Gneiss*   (1 mark)

   (c) Explain *three* economic significance of rocks in Kenya.   (3 marks)

▢   Some rocks such as granite, volcanic peaks may form unique sceneries which attract tourists promoting tourism industry.

▢   Rocks provide the parent materials through weathered rocks especially volcanic rocks forming fertile volcanic soils for agricultural production.

▢   Rocks such as sandstone, marble and limestone are strong and resistant to weathering are used in the building and construction industry.

▢   Minerals and other valuables substances are extracted/mined. Some rocks are used as raw materials for the manufacturing industry.

▢   Impermiable rocks may act as storage of underground water which can be tapped to supply water for domestic and industrial use

   (d) Students carried out a field study on rocks around their school.

▢

(i) State **two** importance of stating the objectives for the study.   (2 marks)

□ They direct the actual activities to be carried out during the study.

□ They guide the possible areas of data collection to obtain required   information.

□ They give the aims/purposes for carrying out the field study.

□ They guide on the appropriate methods/tools for data collection.

 (ii)Give **three** reasons why they prepared a route map of the study area.   (3 marks) □ To identify direction they would take

□ To show the features/rocks they are likely to see. □ To help estimate the distance to be carried □ To help estimate the time to be taken.

□ To help make/prepare time schedule.

(iii)Give **three** activities that the students where involved in during the field study.   (3 marks)

□ Data collection/taking photographs/filming/videoing □ Data recording/ taking notes/tallying/sketching □ Collecting different types of rock samples.

□ Classifying collected rock samples

Labeling of collected rock samples.

8. (a) (i)What is an orogeny?   (2 marks)

□ A fold mountain building period.

(ii)Give **two** factors that influence the folding process of rocks.   (2 marks)

□ The strength/intensity/magnitude of the compressional forces.

□ The nature of the sedimentary rocks/The age of the rocks

(b)   The diagram below shows some types of folds. Use it to answer the question (i) and (ii).

(i)Name the types of folds marked **E** and **F**.   (2 marks)

E-   *Overfold*

F-   *Recumbent fold*

(ii) Describe how an overthrust fold is formed.   (4 marks)

□ Layers of rocks of the earths crust are subjected to compressional forces.

□ Intense folding result in the formation of an overfold.

□ With increased pressure, the overfold results in the formation of recumbent fold producing a thrust plane.

□ The upper part of the recumbent fold slides forward over the lower part along the fault plane resulting to the formation of an overthrust fold

(c)   Name the countries in which the following fold mountains are found.

(i)   Atlas   (1 mark)

□ Western Sahara/ Morocco/ Algeria

(ii)   Alps   (1 mark)

□ Austria/ Switzerland/ Italy/ France/ Leichstein.

(iii)   Himalayas   (1 mark)

□ India/Pakistan/Afghanistan/ Bhutan/ Nepal/ China.

(iv)   Andes   (1 mark)

□ Chile/ Peru/ Bolivia/ Argentina/ Venezuela/ Ecuador/ Colombia

(d)   (i)Apart from fold mountains, name **three** other features resulting from folding.   (3 marks) □ Synclinal valleys/depressions

□ Rolling plains

□

- Ridges
- Intermontane basins ☐ Intermontane plateaus

(ii)Explain **four** ways in which fold mountains influence climate. (8 marks)

- The slopes of mountains which face the sun receive direct sunshine /and are warmer.
- Mountain slopes cause the development of local winds due to variation in pressure between the mountain top and the valley bottom.
- The windward slopes of mountains receive high rainfall due to orographic effect.
- Atmospheric pressure reduces with increasing attitude along a mountain slope.
- Temperature decreases with increasing /altitude along a mountain   slope.

9. (a) (i)Differentiate between a marine delta and a Lacustrine delta. (2 marks)

- Marine delta is formed when a river deposits its load as it enters the sea while lucustrine is formed as a river enters a lake.

(ii)Explain **three** conditions necessary for the formation of a delta. (6 marks)

- The river must have a large load of sediments as it drains into the sea/lake
- The river course must be free from obstacles which may interfere with rivers load/which may reduce the amount of load/filtering the amount of load.
- The gradient of the river at its mouth be low to allow slow flow of the river.
- The sediments must be deposited at a faster rate then they are removed by ocean currents at the river mouths.

(iii) State **three** significance of deltas to man. (3 marks)

- Alluvial deposits in deltas may have valuable minerals which are then exploited.
- Deltas have forms extensive natural vegetation which support variety of wildlife/ ecosystem
- Alluvial deposits forms extensive land settlement/agriculture.

(b) (i)What is a braided channel? (2 marks)

- It‟s a wide and shallow channel of a river made up of network of diverging minor channels separated from each other by sand banks.

(ii)State **four** conditions necessary for the formation of a braided channel. (4 marks)

    A river must carry a large load

- The section where braids form should have a reduced gradient
- A dry season when the volume of water coming from catchment area is reduced.
- Arid conditions which encourage evaporation reducing volume of water.
- Presence of an obstacle/sand banks may cause the river to subdivide into many channels

(c) With the aid of well labelled diagrams, describe how an ox-bow lake is formed.

(8 marks)

-
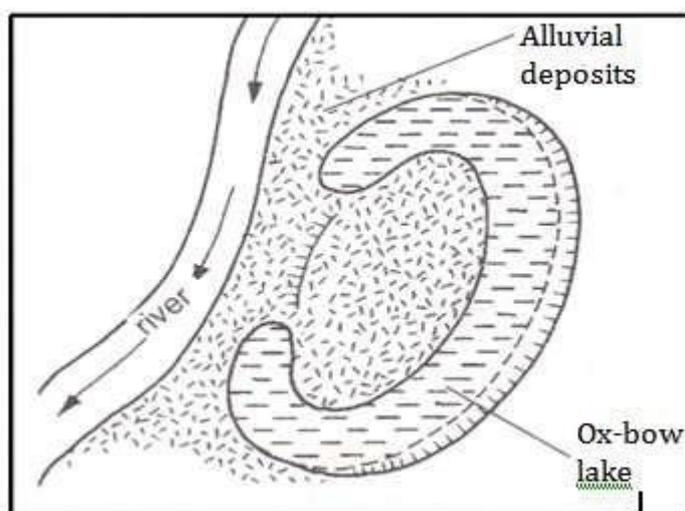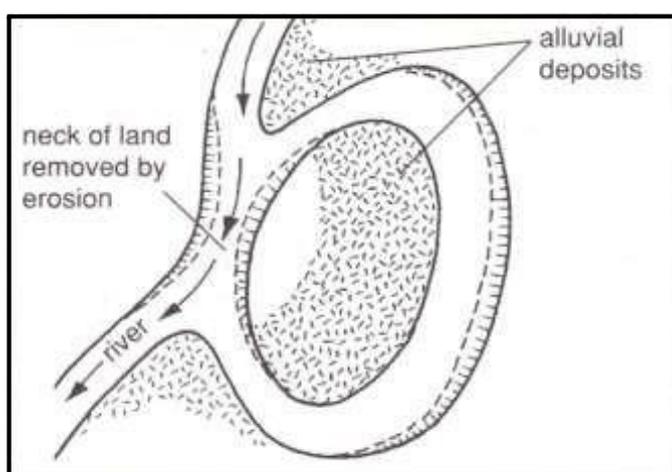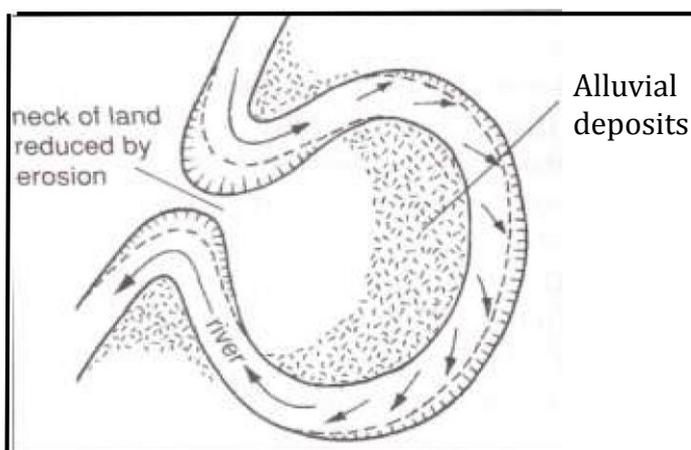
☐   An ox-bow lake forms when a river starts to meander on a flood plain.
☐   Lateral erosion dominates on the outer side of the bend while deposition takes place on the inner bank.
☐   Lateral erosion results in the reduction of the neck of the land between adjacent bends.
☐   The neck of land is eventually worn away.
     Deposition on the meander sides especially during flood blocks off the   meander.

☐

The river abandons the meander and follows the new…… cut that was the neck of the land.

10. (a) What is Karst scenery? (2 marks)

☐ A landscape dominated by limestone, chalk or dolomite rocks which are soluble in rain water through carbonation to form unique features.

(b) State **four** factors which influence the development of a karst landsforms. (4 marks) ☐ Presence of hard and well-jointed limestone, chalk or dolomite rocks for maximum water permeability.

☐ Hot and humid climate /abundant rainfall to increase rate of solution.

☐ Water table should be below/deep the earth‟s surface to allow more water percolating down the rocks cracks enhancing formation of features.

☐ Long period of time the area has been subjected to weathering and erosion processes.

(c) (i)Name the parts marked **X, Y** and **Z**. (3 marks)

X - *Limestone rock/chalk/dolomite*

Y - *Clint*

Z - *Grike*

(ii)Describe how the features marked **Y** and **Z** are formed. (5 marks)

☐ Weathering opens up rock joints in limestone areas. Rain water through carbonation further widens the limestone joints and dissolves the soluble part of the limestone to form narrow and deep depressions called grikes. The more resistant parts will remainraised blocks above the grikes and called clints.

(d) (i) Define a lake. (2 marks)

☐ It is a large/body mass of water occupying a basin/ depression/ hollow on the earth‟s surface.

(ii)Name **two** types of lakes which are formed by volcanic activity. (2 marks)

☐ Crater lakes ☐ Lava-dammed lake

(iii) State **three** reasons why some lakes are salty. (3 marks)

☐ Some lakes lack fresh water inlets emptying into such lakes making them saline.

☐ Some lakes have underground inlets having high concentration of salts making them saline.

☐ Some rivers flowing into these lakes flows over rocks containing high salt contents which are dissolved by river water and draining into such lakes making them saline.

☐ Many lakes do not have outlets to drain away excess salts leading to accumulation of salts in these lakes making them saline.

☐ Some lakes are formed in arid and semi-arid areas having high temperatures causing high evaporation from these lakes increasing the accumulation and concentration of dissolved minerals salts making them saline.

☐ Most lakes have their underlying rock basement containing lots of minerals salts which may be dissolved directly by the lake waters making them saline.

(iv) Explain**four** ways in which lakes are of significance to human activities. (4 marks)

☐ Some lakes forms major inland fishing grounds providing fish as source of animal protein.

☐ Fresh water lakes are source of fresh water for domestic/industrial use.

☐ Some lakes may contain minerals such as trona which is exploited/some lakes may contain minerals used as raw materials in industries.

☐ Man-made lakes are used as reservoirs for production of hydroelectric power providing energy for domestic/industrial uses.

☐ Sand deposit along the shores of some lakes are harvested and used as building and construction materials. ☐ Some lakes provide cheap means of water transport for people/ goods promoting trade.

MOKASA JOINT EVALUATION EXAMS
312/2
GEOGRAPHY PAPER 2
MARKING SCHEME

SECTION A:

☐
1. a) State two ways in which minerals occur (2 marks)
☐ Minerals may occur in beds and seams
☐ Minerals may occur as weathered products
☐ Minerals may occur in alluvial or placer deposits
☐ Minerals may occur in veins and lodes
☐ Minerals may occur as evaporates
      b) Describe panning as a method of mining (3 marks)
☐ The method involves digging out the sand/gravel which contains mineral particles and mixed with water from the river in a shallow pan. The mixture is then whirled such that the lighter particles of sand/gravel are pushed on the sides of the pass white the heavier mineral particles are at the bottom of the pan which are easily removal by hand as the waited mineral.

2. a) Differentiate between a forest and forestry (2 marks)
☐ A forest is a continuous growth of trees and undergrowth covering a large tract of land.
☐ While forestry is a science of developing and managing forests including cultivating them/its science of planting, caring and using trees
The two MUST be well defined to score.
      b) Give three characteristics of tropical hard-wood forest (3 marks)
☐ Some trees are evergreen, shedding a few of their leaves at a time, but never remaining bare.
☐ Some trees are deciduous especially those in the Monsoon forests.
☐ Some trees are tall – grow beyond fourty six metres/some have straight trunks.
☐ Most of the trees have large trunks with buttress roots. This makes exploitation difficult.
☐ Tropical hard-wood forest have trees that are very heavy, some would not float in water.
☐ Trees take a very long time to mature – some take 65 and 100 years. (Any 3) (3 marks)

3. a) Name two main rivers which supply water to Mwea Tebere irrigation scheme. (2 marks)
☐ R. Thiba ☐ R. Nyamindi
b) State three environmental problems faced by farmers in Mwea-Tebere irrigation scheme. (3 marks)
☐ Incidences of water borne diseases e.g. bilharzias/Malaria.
☐ Pest infestation which lowers production e.g. Quelea birds.
☐ Water weeds which compete with rice for nutrients e.g. Rhizome weeds ☐ Silting in the canals reduces the amount of water ☐ Low water table in the rivers during the dry season.

4. a) Give two methods used to rehabilitate land in Kenya (2 marks)
☐ Afforestation and Re-afforestation
☐ Bush fallowing
☐ Planting cover crops
☐ Mulching
☐ Manuring
☐ Construction of glabious
☐ Drainage trenches on floaded areas.
b) State three benefits of Perkera Irrigation Scheme (3 marks)
☐ Made use of unproductive semi-arid land into productive land.
☐ Supplied agricultural produce to the local market
☐ Created employment opportunities for local population
☐ Raised the standards of living of many farmers.

5. a) What is a game sanctuary (2 marks)
☐ Its an area that has been set aside for protection of birds or other kind of animals or plants which are endangered/threatened with extinctive.

b) State three reasons for encouraging domestic tourism in Kenya   (3 marks)

☐   To make Kenyans appreciate the countries national heritage/artefacts/culture/wildlife.

_____

     To ensure that Kenyans become familiar with different parts of the country
☐ To make use of tourist facilities during the low tourist season.
☐   To expose Kenyans to the wide variety of recreational facilities
☐   To enable people from different communities to interact/to enhance national unity.
☐   To promote domestic trade by allowing circulation of money within the country. (Trade in handcrafts which are souvenirs)
☐   To create employment in tourists attraction sites   Any 3 (3 marks)

SECTION B
Answer question 6 and any other TWO questions from this section.

6. Study the photograph below and use it to answer question (a)

a) (i) Name the type of photograph shown above   (1 mark)
☐   *Ground general view*

(ii) What time of the day was the photograph taken if the camera was held facing south?   (1 mark)
☐   *Evening*

(iii) Draw a rectangle measuring 16cm by 9cm to represent the area of the photograph. On it sketch and label the main features shown on the photograph   (5 marks)

(iv) Describe the landscape of the area represented by the photograph.   (3 marks)

☐   The land rises from the foreground towards the background ☐ The area covered with vegetation is slightly raised.

☐   The area in the background has bare rock surfaces/rock outcrops.

☐   The area in the foreground is gently sloping.

    b)   i)Identify two counties in the Rift Valley where ranching is practiced.   (2 marks) ☐ Kajiado

☐   Laikipia

☐   Nakuru ii) Name one exotic breed of beef cattle reared in Kenya   (1 mark) ☐ Aberdeen Angus

☐   Hereford

☐   Galloway

☐   Charoleus

☐   Shorthorn

☐   Sahiwal

    c)   State four physical factors which favour beef farming in Argentina.   (4 marks)

☐   Availability of water for cattle supplied using wind pumps

-
- Warm and wet climate/maritime climate makes it possible for grazing throughout the year.
- Gently sloping landscape for easy movement of animals
- Moderate temperatures /10 - 24°C/ cool winters and warm summers ensures continuous growth of pasture.
- Fertile loose soils support growth of pasture.

   d)   Explain four benefits of beef farming to the economy of Argentina.   (8 marks)

- Beef is exported to earn foreign exchange which is used to develop other sectors of the economy.
- Beef farming has led to growth of towns e.g Buenos Aires leading to urbanization in the country.

- Beef farming has resulted in development of roads/railway lines thus increase accessibility.
- Beef farming is a source of income to farmers which has improved their living standards.
- Beef farming provides raw materials used in industries thus promoting industrialization.
- Beef farming increases employment opportunities hence improve the living standards of citizens.

7. a) Define agro-forestry (2 marks)

- The land use system which enables the portion production of trees, crops and livestock on a given unit of land for maximum production and land sustainability.

b) State three benefits of agro-forestry (3 marks)

- To maintain soil fertility
- For supply of wood and wood products
- Some trees are used for animal fodder
- Some trees are planted to provide fruits for human and animal consumption
- Trees grown act as wind breakers at the edge of farm plots or between rows of crops.

c) i)Explain how the following factors have influenced distribution of natural forests in Kenya.

- Aspect: The windward slopes of mountains receives high rainfall hence wet therefore have dense forests.
- The south facing slopes in the northern hemisphere are warmer and wet therefore having dense/luxuriant forests.
  (2 marks)
- Soils: Deep, well-drained and fertile soils supports plant life hence having variety or dense forest cover.
  (2 marks) ii)

Explain four ways of managing forests in Kenya (8 marks)

- Research carried out on soil requirements for different tree species enabling the foresters to plant trees in suitable areas.
- Carrying out public campaigns on the value of forests through the mass media by the government and nongovernmental organizations.
- Establishment of training and research institutions dealing with forestry for trained and qualified personnel to manage forests.
- Enacting of laws and regulations which are meant to effectively manage forests by the government to allow maximum participation of local people.
- Creation of forest reserves so as to protect mainly indigenous forest trees form extinction.

d) Compare softwood forestry in Kenya and Canada under the following sub-headings

- Transportation: Transportation of logs in Kenya is done using tractors, lorries, trucks and trains while in Canada, it is done using mobile cable steel bars, skiing on icecovered ground and also floating down rivers.
- Harvesting: In Canada, cheap harvesting is done through clear cutting while in Kenya it is done through selective logging.

  In Canada logging is done during winter and early summer while in Kenya, it takes place throughout the year.In both commercial logging is mechanised

- Distribution: In Kenya, softwood forests are found mainly in the highlandswhile in Canada they are found both in highland and lowland areas.In Kenya softwood forests cover a small percentage of the totalland area while in Canada they cover large tracts of land.
- Climate: In Canada, due to low temperatures, softwood tree species take many years to mature while in Kenya, moderate to high temperature encourages faster growth and maturity to take short time/few years.

8. a) What is mixed farming? (2 marks)

- The type of agriculture involving the growing of crops and rearing of livestock on the same piece of land/farm on rotational basis.

b) State three economic factors influencing agriculture (3 marks)

- Operational costs of growing crops and rearing animals
- Marketing expenditure of the products to the market
- Prize actualizations of agricultural commodities
- Government policies through subsidies and guaranteed prizes to the farmers.

☐

c) i)Give four physical factors influencing coffee growing in Kenya   (4 marks)

☐ Temperature between 14°C - 26°C/High up to 30°C.

☐   Rainfall high rainfall well distributed annually/1000-

2050mm ☐ Altitude ranges 910-2100 above sea level/high.

☐   Red volcanic soil/medium loam soils/deep, well drained

soils.

     Undulating landscape/gentle slopes

ii) Describe coffee production in Kenya from harvesting to marketing   (8 marks)

☐   Harvesting of coffee involves manually picking the red ripe berries which are ripe then transported to the collecting centres where they are weighed and sorted to remove bad ones.

☐   They are then transported to the processing factory where they are put in large tanks having water to remove the outer covering pup exposing two white beans which are then washed and sun-dried. The beans are sorted according to size and quality then roasted at temperature about 100°C then grounded into powder and packaged ready for marketing by the Coffee Board of Kenya.

iii) Give three differences between Coffee Farming in Kenya and Brazil   (6 marks)

☐   In Kenya, coffee farming facing climatic problem of heavy rainfall and prolonged drought while in Brazil farmers faces the problems of frost.

☐   In Kenya, land ownership is individual while in Brazil there is more extensive land called Fazendas suitable for coffee growing.

☐   In Kenya, the transportation of coffee berries from the farms to factories is mainly by road which are inadequate while in Brazil transport of coffee is by well-developed and adequate road and railway network from the farms to the factories.

d) You intend to carry out a field study on coffee growing in a farm near your school compound. State two advantages of using secondary data during data collection. (2 marks)

☐   Easy to obtain data which has been

analysed ☐ It is cheaper/less expensive

☐   Saves time.

9. Use the map of North America below to answer questions (a) and (b)

a) Name;(i)   The fishing ground shaded

☐ *N.E. Pacific fishing ground   (1 mark)*

     (ii) The ocean current marked (b)

☐ *Warm North Pacific current (1 mark)*

     b)   Explain four physical conditions necessary for fishing in the fishing ground shaded   (8 marks)

☐   The availability of cool climatic condition of about 20°C favours the variety of fish species favours which is fish food.

☐   The warm North Pacific current that washes the coastline raises the low temperatures resulting in waters that are ideal for the health growth of plankton and ice free allowing fishing to be carried out throughout the year.

☐   The indented-coastline with several fords and river estuaries as well as sheltered inlets forms good sites for fish ports and fish breeding respectively.

☐   The presence of several rivers and lakes that form suitable fishing grounds for species such as salmon.

☐   The rugged mountainous landscape, dense forest cover in British Columbia and rocky surfaces discourage agricultural activities. This has forced many people to take up fishing as a source of food.

☐   The presence of excellent fishing ports, such as Prince Rupert, West Port makes it easier to access foreign markets.   (Any 4 well explained 4 x 2 = 8 marks)

     c)   Describe trawling method of fishing   (6 marks)

☐   A bag shaped net is attached to a trawler/ship

☐   The nets mouth is kept open by other boards

☐   The upper part of mouth of net has floats and weights at the bottom; to keep part of the net at the sea bed.

☐   Each end of the net is attached to a boat

☐ The net is cast to the waters, and the trawler drags the net along the sea bed

☐ After sufficient fish has been caught the net is hauled to the trawler to empty the fish. NOTE: steps to follow to score.

d) i)Explain three ways in which overfishing can be controlled in Lake Naivasha (6 marks)

☐ Restrictions enforced on the type and size of nets that should be used to avoid indiscriminate fishing.

☐ By restocking, releasing fingeshings to increase generation of fish.

☐ A selected number of fishermen can be licensed to carry out fishing to allow breeding and maturity of fish. ☐ Establishing fish farms with popular species of fish such as tilapia to ease pressure on fishing in the lake.

(Any 3 well explained 3 x 2 = 6 marks)

ii) State three significance of fish farming (3 marks)

☐ Fish farms provide fish for both subsistence and commercial use.

☐ Fish from fish farms is used to restock overfished grounds

☐ Establishing and fishing in fish farms provide employment opportunities

☐ The development of fish farms complements the fish being caught from natural waters

(Any 3 well stated 3 marks)

10. a)i)Apart from coal, name three other non-renewable sources of energy. (3 marks) ☐ Oil/petroleum

☐ Uranium ☐ Natural gas

ii) State four reasons why there has been a decline in the use of coal as a source of energy. (4 marks) ☐ Coal has a low calorific value

☐ Coal is dirty to use

☐ Exhaustion of coal

☐ Discovery of oil and other alternative efficient forms of energy ☐ Coal is bulky and thus costly to transport.

☐ It is expensive to mine coal found deep underground.

iii) Give three advantages of using wind energy (3 marks)

☐ It is a cheap source of energy

☐ It is an inexhaustible source of energy/renewable

☐ It is a clean/environmentally friendly form of energy

☐ It is free

☐ It is safe to use

☐ It can be found everywhere

☐ Land between the windmills can be put into other uses.

d) Name two examples of agricultural non-food processing industries in Kenya (2 marks) ☐ Tobacco processing

☐ Footwear making

☐ Leather tanning

☐ Beeswax processing

☐ Sisal processing ☐ Pyrethrum processing e) (i) Name;

The canal marked U (1 mark)

☐ Lippesite canal

The river marked V (1 mark)

☐ River Ruhr

The town marked W (1 mark)

☐ Dortmund ii) Explain three factors which led to the growth of iron and steel industry in the Ruhr region of Germany.

(6 marks)

☐ Availability of coal/iron ore/limestone from the Rhine Valley that provided raw materials needed in the industry.

- □
- □ River Rhine/Ruhr/Lippe/Encher/Wupper provided water required for cooling machines in the industry/for industrial use.
- □ The region is served by navigable rivers e.g. R. Rhine and canals e.g. Lippesite which provided cheap transport for bulky raw materials and finished products.
- □ Coal from the Ruhr Region and imported petroleum provided power required in the industry
- □ The local population had acquired skills on iron working/availability of local skilled labour and this formed the foundation of iron and steel industry.
- □ The presence of rich companies/krupp families which provided capital for the development of the industry. □ The dense/affluent population in Europe (Central and Western)/Germany provided ready market for iron and steel. f) Explain two environmental problems which have resulted from the development of car manufacturing industry in Japan.   (4 marks)
- □ It has led to air, noise and water pollution which is dangerous to human health and wildlife/visibility.
- □ Dumping of industrial waste leads to environmental degradation/water or soil pollution.
- □ Increased production of cars and the high local purchasing power has led to traffic congestion in the cities.
- □ High demand for limited raw materials like coal has resulted to over exploitation.
- □ Emergence of many factories has attracted large manpower which has resulted in housing problems/inadequate housing.

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312/1
GEOGRAPHY
Paper 1
SECTION A

Answer all the questions in this section.

1. (a) State two reasons why Geography is a unique subject. (2 mks)
    (b) The diagram below shows the relationship between geography and other disciplines.
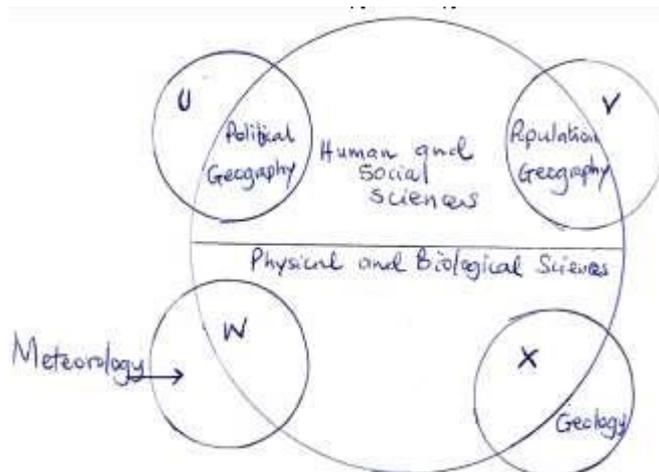
     Name the disciplines marked U, V, W and X. (4 mks)

2. (a) If a given parcel of air at 35⁰C contains 15.5 gm/m³ of moisture and the given air can hold a maximum of 20 gm/m³ at the same temperature, calculate the relative humidity. (2 mks)
    (b) Draw a well labelled diagram to illustrate a mercury Barometer. (3 mks)

3. (a) Study the diagram below showing mass wasting.
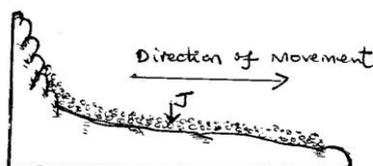
    (i)   Name the mass wasting process in the diagram. (1 mk)
    (ii) Name the part marked J. (1 mk)
    (b) State three effects of this process on the landscape. (3 mks)

4. (a) Define a lake. (2 mks)
    (b) State three effects of a lake on the climate of the surrounding areas. (3 mks)

5. (a) Name two surface features found in a Karst region. (2 mks)
    (b) State three conditions necessary for the formation of a Karst scenery. (3 mks)

    SECTION B

Answer question 6 and any other TWO questions from this section.

6. Study the map of Kitale 1:50,000 (sheet 75/3) provided and answer the following questions.
    (a)   (i)Name two districts found in the area covered by the map. (2 mks)
           (ii)What is the magnetic variation of the map? (1 mk)
    (b)   (i)Convert the scale of the map into a statement scale. (2 mks)
           (ii)Calculate the area of land to the North and North East of the Loose Surface road C637 and B10/2 in the North Eastern corner of the map. (Give your answer in square kilometers). (2 mks)
    (iii) Measure the distance of the Loose Surface Road C638 from grid reference 400137 and reference
           472106. (Give your answer in Kilometres). (2 mks)
    (c)   Explain three factors which have influenced the distribution of settlements in the area covered by the map. (6 mks)
    (d)   Describe the relief of the area covered by the map. (4 mks)

    (e)   Citing evidence from the map, explain three factors that favour cattle rearing in Kitale area.   (6 mks)

7.   (a) (i) What is faulting?   (2 mks)   (ii)Apart from normal fault and reversed faults, name three other types of faults. (3 mks)

    (b) (i)Apart from tensional forces, explain two other causes of faulting.   (4 mks)

       (ii)With the aid of well-labeled diagrams, describe how a rift valley was formed by tensional forces.

                                             (8 mks)

    (c) Explain four effects of faulting on drainage.   (8 mks)

8.   (a) Explain how the following factors influence the distribution of vegetation.

    (i) Climate   (2 mk) (ii) Human beings   (2 mks

    (b) The map below shows some vegetation zones of Kenya. Use it to answer question (i).
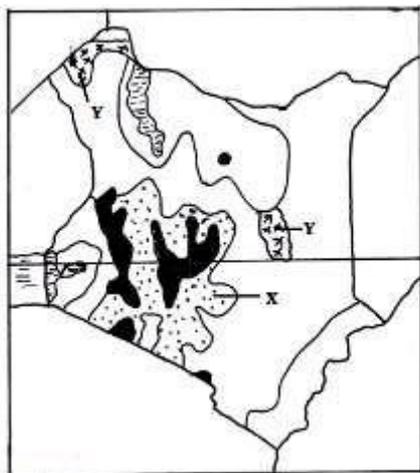
    (i)   Name the vegetation zone marked X and Y.   (2 mks)

    (ii) Give two uses of Savannah vegetation.   (2 mks)

    (iii) Describe the characteristics of Mediterranean type of vegetation.   (5 mks)

    (c) Explain three ways in which desert vegetation adapts to climatic conditions.   (6 mks)   (d)

      You are planning to carry out a field study of the vegetation within the local environment.

(i)State three preparations you will make for the field study.   (3 mks)

           (ii)How will you identify the different types of vegetation?   (3 mks)

9.   (a) (i)Distinguish between river discharge and river regime.   (2 mks)

          (ii)Describe how a river erodes through the following processes:-

      •   Abrasion   (3 mks)

      •   Solution   (2 mks)

    (b) Describe how the following features are formed:

          (i)Gorge, when a waterfall retreat   (4 mks)

(ii)River braids   (4 mks)

    (c) State four characteristics of a river in the old stage.   (4 mks)

    (d) Explain <u>three</u> significance of a river to human activities.   (6 mks)

10. (a) What is soil profile?   (1 mk)

    (b) The diagram below shows a soil catena.
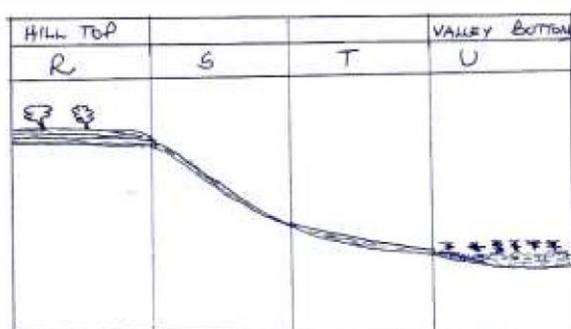
(i) Name the type of soils found in position R and U.   (2 mks)

(ii) State two characteristics of soils found in section marked. R and U   (4 rks)

(c) (i) Name two components of soil.   (2 mks)

(ii) Differentiate between soil structure and soil texture.   (2 mks)

(d) Explain how the following factors influence soil formation.

(i) Climate   (4 mks) (ii) Vegetation   (4 mks)

(e) Explain how the following practices cause soil degeneration.

Burning   (2 mks)

Leaching   (2 mks)

Over-application of fertilizers   (2 mks)

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Paper 2

GEOGRAPHY

SECTION A

Answer ALL the questions in this section.

1. (a) Name *two* indigenous softwood tree species found in Kenya.   (2 marks)   (b)
State *three* factors that favour the development of softwood forests in Canada.   (3 marks) 2. Use the
map of Kenya below to answer question (a).
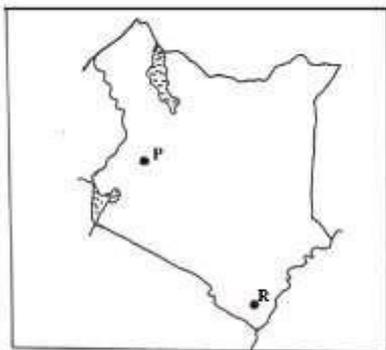
 (a) Name the minerals mined in the areas marked **P** and **R**.   (2 marks) (b) State *three* benefits of Gold mining to the
economy of South Africa.   (3 marks)

3.   (a) State *three* factors which led to the growth of Eldoret town.   (3 marks) (b) State *three* functions of Central
     Business District in a town.   (3 marks)

4.   (a) State *two* negative effects of tourism in Kenya.   (2 marks)

        (b) Sate *three* social-economic factors that attract tourists in Switzerland.   (3 marks)

5.   Describe long lining as a method of fishing.   (4 marks)

     SECTION B

   *Answer question 6 and any other TWO questions from this section.*

6.   The table below shows the prices of sugar in Kenya shillings per ton in some countries in Africa. Use it to answer
     question (a).

Year	Kenya	South Africa	Tanzania	Zambia
2010	95,400	61,927	68,702	84,447
2011	111,713	67,462	66,985	93,798
2012	110,878	65,173	90,649	86,832

 (a) (i) Draw a divided rectangle 16cm long to represent the prices of sugar in the year 2012. (7 marks)

 (ii) State *two* advantages of using divided rectangles to represent data.   (2 marks)

        (b) State *three* physical conditions that favour large scale sugarcane farming in Western Kenya. (3 marks)

        (c) Describe the stages involved in sugar production from harvesting to marketing.   (7 marks)

           (d) Explain *three* problems facing sugarcane farming in Kenya.   (6

        marks) 7. (a) State *two* advantages of written communication.

              (2 marks)

        (b) Use the outline map of East Africa provided to answer questions (i) and (ii).

       (i)   Name the towns marked **W** and **X**.   (2 marks)

       (ii) Name the railway lines marked **Y** and **Z**.   (2 marks)

   (c) (i) State *two* ways in which Kenya would benefit from the construction of the Standard gauge railway. (2 marks)

      (ii) Explain *three* factors that hinder development of River transport in Africa.   (6 marks)

   (d) The map below shows the Great Lakes and St. Lawrence Seaway. Use it to answer question (i) and (ii).

(i)Name the canals marked **J** and **K**.   (2 marks)

(ii)Name the towns marked **M, N** and **P**.   (3 marks)

       (iii)Explain *three* measures that were taken to solve the challenges that faced navigation along the Great Lakes and

       St. Lawrence Seaway.   (6 marks)

8.   (a) Differentiate between manufacturing industries from tertiary industries.   (2 marks)

     (b) (i)Name *two* non-food agricultural industries in Kenya.   (2 marks)

(ii)State *three* measures that are being taken by the government of Kenya to promote Jua-Kali industries. (3 marks)

(iii)Describe the characteristics of the cottage industries in India.   (5 marks)

     (c) (i)State *three* benefits of decentralizing industries in Kenya.   (3 marks)   (ii)Other than iron and steel, name *two* other industries located in Ruhr region of Germany.   (2 marks) (iv) Explain *four* factors which influenced the location of iron and steel industry in the Ruhr region of Germany.

                                      (8 marks)

9.   (a) (i)What is sex ratio?   (1 mark)

 (ii)Apart from population census, give *two* other primary sources of population data.   (2 marks)

       (iii)   State *three* significance of population census to a country.   (3 marks) (b) Explain *four* factors that have led to a high population density in the Kenya Highlands.   (8 marks) (c) The pyramid below represents the population structure of Sweden.

Population pyramids of Sweden 2011 (OECD stat)
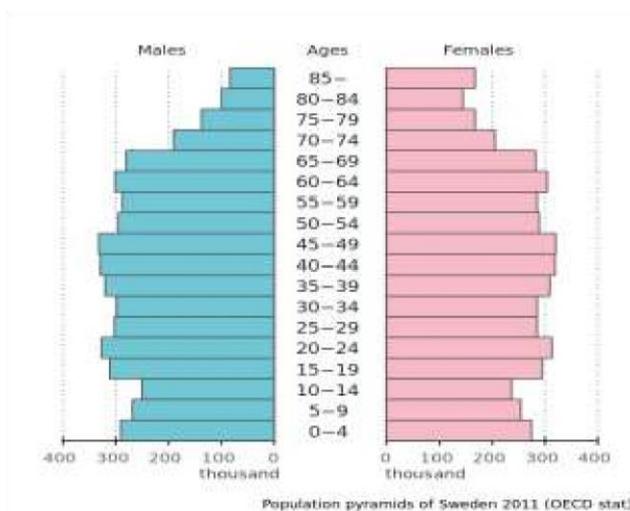
Describe the characteristics of population represented by the pyramid. (5 marks) (d) Explain *three* cause of urban-rural migration. (6 marks)

10. (a) (i)Distinguish between visible and invisible exports. (2 marks)

(ii)Name *two* seaports that handle exports in East Africa. (2 marks)

(b) Explain *three* measures Kenya can take to reduce her unfavourable balance of trade. (6 marks)

(c) Explain *three* reasons for low volume of trade between the countries in Africa. (6 marks)

(d) (i)State *three* benefits of ECOWAS to the member states. (3 marks)

(ii)Explain *three* ways in which the future of international trade in Kenya can be improved. (6 marks)

KASSU JET
GEOGRAPHY
PAPER 1
MARKING SCHEME SECTION A
Answer all the questions in this section.

1. (a) State two reasons why Geography is a unique subject. (2 mks)

☐ It emphasizes the spatial distribution of both physical and human features on the earth surface and maps them to show their relationships and patterns.

☐ Geography relates well with the other disciplines of earth science social science and geometrical science, hence has a wide scope.

(b) The diagram below shows the relationship between geography and other disciplines.
Name the disciplines marked U, V, W and X. (4 mks)

U - Political

V - Demography

W - Geomorphology X - Climatology

2. (a) If a given parcel of air at 35⁰C contains 15.5 gm/m³ of moisture and the given air can hold a maximum of 20 gm/m³ at the same temperature, calculate the relative humidity. (2 mks)

$$R.H = \frac{Absolute\ Humidity}{The\ maximum\ amount\ of\ water} \times 100\%$$

the air could hold at the same temp

$$\therefore \frac{15.5\ gm/3^2}{20\ gm/m^3} = 0.775 \times 100 = 77.5\%$$

(b) Draw a well labelled diagram to illustrate a mercury Barometer. (3 mks)
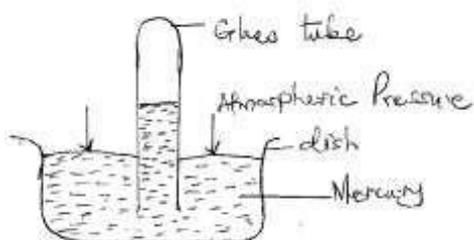
3. (a)
    (i) Name the mass wasting process in the diagram.   **(2 mks)**
☐ Debris slide
    (ii) Name the past marked J.   **(1 mk)**
☐ Talus / scree
(b) State three effects of this process on the landscape.   **(3 mks)**
☐ Causes slope retreat / steepness of the slope.
☐ Causes scars on the land / on the face of the slopes.
☐ Lead to accumulation of debris at the base of the slopes.
4. (a) Define a lake.   **(2 mks)**
☐ This is a mass of water in hollow depression on the earth surface.
(b) State three effects of a lake on the climate of the surrounding areas.   **(3 mks)**
☐ High evaporation of the lake causes high humidity.
☐ High evaporation rates results into convectional rainfall.
☐ The lake results into land and sea breeze which moderate the temperature.
5. (a) Name two surface features found in a Karst region.   **(2 mks)**
☐ Lime stone pavement / swallow holes
☐ Grykes and clints, Karst windows
☐ Blind valleys, Dolines / polje, uvalas
(b) State three conditions necessary for the formation of a Karst scenery.   **(3 mks)**
☐ Moderate rainfall / humid climate
☐ High temperature
☐ A deep / low water table
☐ Hard and well jointed rocks.
    SECTION B
    Answer question **6** and any other **TWO** questions from this section.
6. Study the map of Kitale 1:50,000 (sheet 75/3) provided and answer the following questions.
    (a)(i)Name two districts found in the area covered by the map.   **(2 mks)**
☐ West Pokot
☐ Trans-Nzoia
☐ Elgeyo-Marakwet
    (ii) What is the magnetic variation of the map?   **(1 mk)**
☐ $2^0 23''$
    (b)(i)Convert the scale of the map into a statement scale.   **(2 mks)**
        Map scale 1:50,000
        i.e. 1cm represents $\underline{50,000}$ cm
                100,000
                    = 0.5km
        Statement scale: 1cm represents
        0.5km/½km

    (ii) **Calculate the area of land to the North and North East of the Loose Surface road C637 and B10/2 in the North Eastern corner of the map. (Give your answer in square kilometers). (2 mks)**

Complete squares   =   11

Incomplete squares   = $\dfrac{14}{2}$ = 7

Total complete squares =   11 + 7 = 17

Area   =   17km^2

    (iii) **Measure the distance of the Loose Surface Road C638 from grid reference 400137 and reference 472106. (Give your answer in Kilometres). (2 mks)**

□ 9.6 km

(c) Explain three factors which have influenced the distribution of settlements in the area covered by the map. (6 mks)

□ The hilly areas along the forest have few or no settlements because the land is steep/rugged which makes construction costly/difficult.

□ There are no settlements in the forest because it is a forest reserve where human activities are prohibited.

□ Kitale municipality area is the most densely settled because it has a dense road network for ease of movement and social amenities.

□ There are clusters of settlements in the plantations since the land is set aside for farming.

□ There are no settlements on the seasonal and papyrus swamps because they are poorly drained/marshy which discourage human activities.

□ There are many settlements in the South Easter and central parts of the area covered by the map because the land is gently sloping which makes construction easy.

(d) Describe the relief of the area covered by the map. (4 mks)

□ The landscape is disserted by many river valleys.

□ There are many narrow river valleys.

□ There are numerous steep slopes in the North East/gentle slopes to the East.

□ There are many interlocking spurs along the river valleys.

□ There are many hills in the North East.

□ The main ridge is along the forest.

□ The area with the swamp is flat.

□ There are some broad valleys in the Eastern part of the area.

□ The highest altitude is 2362m/ the lowest is 1820m above sea level.

(e) Citing evidence from the map, explain three factors that favour cattle rearing in Kitale area. (6 mks)

□ The presence of scrub/scattered trees show that there is natural pasture for cattle.

□ The presence of many rivers shows that there is adequate water for cattle.

□ The presence of many rivers show that there is adequate water for cattle.

□ The area has high attitude above 1820m which provides cool conditions suitable for cattle rearing.

□ There is access to veterinary services shown by the presence of a cattle dip for treatment of cattle.

□ Dense settlements provide market for cattle/cattle products.

□ Availability of transport shown by roads/tracks for movement of cattle/cattle products.

□ The large tracts of land with few settlements in the Southern, Central and Eastern parts show that there is extensive area available for grazing

7. (a) (i) What is faulting?

□ This is the fracturing / breaking of the earth"s crust.

(ii) Apart from normal fault and reversed faults, name three other types of faults. (3 mks) ❑ Thrust fault

❑   Tear / shear / slip fault

❑   Anticlinal fault

(b) (i) Apart from tensional forces, explain two other causes of faulting.(4 mks)

❑   Horizontal movements / tectonic forces may compress the crustal rocks causing the rocks to fold.

❑   Some parts of the folded rock develop fractures hence faulting.

❑   Horizontal forces within the rocks moving past each other in opposite directions

❑   Rocks fracture as a result of teaching / shearing of racks in the region where forces move past each other.

❑   Vertical movements occur within the crust. They exert strain in the rocks making them fracture.

(ii) With the aid of well-labeled diagrams, describe how a rift valley was formed by tensional forces.

(8 mks)

-    Layers of rocks within a region are subjected to the tensional forces.
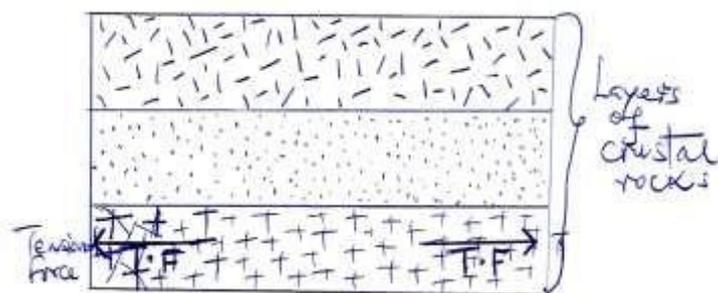
-    Lines of weakness develop / two parallel lines f weakness called normal faults form.
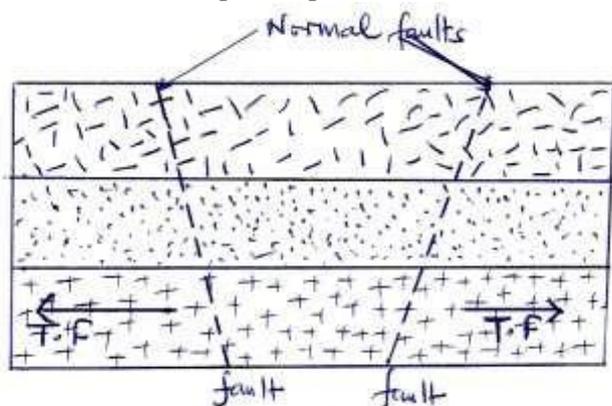
-    Further tension pull the side blocks of land to move apart while the middle block subside / sink gradually.
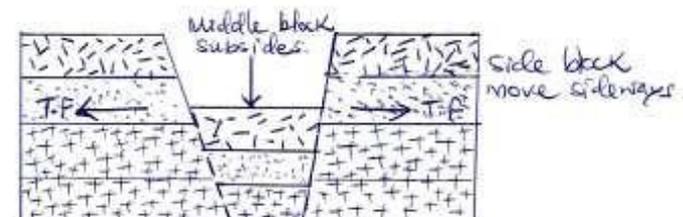
-    The subsided / down warped middle block forms the floor of the rift valley.
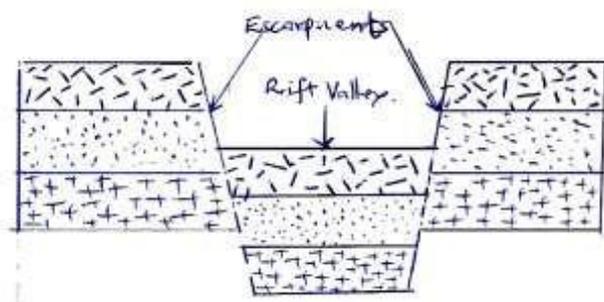
Diagram – 4
Explanation – 4
Total 8 mks

(c) Explain four effects of faulting on drainage. **(8 mks)**

☐ Vertical faulting across a river leads to formation of a waterfall / river rejuvenation / knickpoint.

☐ Rift faulting in basin forms depressions in which rain / river water / underground water collect in them to form lakes.

☐ Uplifting of the landscape may cause the river change / reverse direction of flow

☐ Rivers may disappear into the ground through fracture / fault lines

☐ Faulting may develop on the surface causing the river to flow along the fault hence fault-guided drainage pattern

8. (a) Explain how the following factors influence the distribution of vegetation. (2 mks)
   (i)Climate

☐ Areas which have low temperatures have scarity/no vegetation/areas which have moderate temperature have dense vegetation.

☐ Regions which receive high rainfall have dense vegetation growth/areas which have low rainfall have scanty/scrub vegetation.

☐ Hot dry winds cause drought conditions which is responsible for scanty/scrub vegetation/moist winds lead to increased precipitation when they blow over a region hence dense vegetation.

☐ Places which receive long hours of sunlight have many varieties of lants/areas which receive less/short hours amounts of sunlight have few/little variety of plants.

   (ii) Human beings **(2 mks)**

☐ Some human activities have led to clearing of natural vegetation causing the establishment of deserts/semi natural vegetation.

☐ Conservation measures geared towards protecting the existing vegetation have led to establishment of forest/natural reserves.

   (b)

(i) Name the vegetation zone marked X and Y. **(2 mks)**
   X -Woodland and grassland
Y -Swamp vegetation

(ii) Give two uses of Savannah vegetation. **(2 mks)**

☐ Commercial ranching/grazing is practiced in some parts of the grassland.

☐ Are home to wild animals.

☐ The trees are habitats for bees which provide honey.

☐ Some of the shrubs/herbs are used for medicinal purposes.

☐ Some of the wild fruits/berries are consumed as food.

   (iii)Describe the characteristics of Mediterranean type of vegetation. **(5 mks)**

☐ Some plants have small/thick-skinned/leathery leaves/spiny leaves.

☐ Some plants have long roots.

☐ Some plants have thick barks.

☐ Some plants have large fleshy bulbous roots.

☐ Some plants have shiny/waxy leaves. ☐ Some trees are deciduous

☐ Some plants are evergreen.

☐ The vegetation is adapted to the long hot and dry summers.

☐ Some plants have fleshy leaves.

☐ Grasses dry off during summer and germinate during winter.

☐ Shrubs/thickets/bush/thorny bush/marquise/machia/ chaparral/malle are common.

☐ Woody scrub is common in very dry areas.

(c) Explain three ways in which desert vegetation adapts to climatic conditions. **(6 marks)**

☐ Some plants have thick/fleshy/succulent leaves/barks to enable them store water.

☐ Some plants have long roots to tap the underground water.

☐ Some have no leaves/have thin/spiky/waxy/needle like leaves to reduce transpiration.

☐ Some plant seeds remain dormant awaiting the short rains.

☐ Some plants have thick/hard barks to reduce transpiration.

☐ Some plants with in the absence of moisture but have quick recovery ability.

☐ Some plants have thorns to protect themselves from browsing animals.

☐ Some plants have underground bulbs to store water.

☐ Most plants are stanted/dwarf like due to the harsh conditions.

☐ Some plants are quick sprouting to take advantages of the short-lived desert rains.

(d) You are planning to carry out a field study of the vegetation within the local environment.
(i)State three preparations you will make for the field study. **(3 marks)**

☐ Formulate objectives/hypotheses for the study.

☐ Carry out reconnaissance of the area of study.

☐ Seek permission from the relevant authorities.

☐ Acquire appropriate stationery/tools/equipment.

☐ Prepare a working schedule.

☐ Read more information about vegetation from secondary sources.

☐ Divide students into groups and assign work to each group

(ii)How will you identify the different types of vegetation? **(3 marks)**

☐ By their appearance

☐ Their colour

☐ By their age

☐ By their leave size/pattern type ☐ By the nature of their barks

☐ By the texture of their leaves.

☐ By their system of the roots.

9. (a) (i)Distinguish between river discharge and river regime. **(2 mks)**

☐ River discharge is the amount of water passing through a particular point at a river course while river regime is the seasonal fluctuation in the volume of a rivers water.

(ii) Describe how a river erodes through the following processes:-
Abrasion **(3 mks)**

☐ The load carried by the river is used as a tool for scouring, scrapping , scratching and grinding. ☐ The load is hurled by the river water against the bank or dragged along the river bed ☐ The load chips off the rock on the bank and floor.

☐ The load being dragged smoothens the river bed through grinding and scraping.

☐ Rolling of some load on the river bed lead to formation of potholes.

Any 3 x 1 = 3 mks

Solution **(2 mks)**

- The rocks of the river channel can dissolve in water e.g. gypsum, dolomite.

- As water flows it dissolves soluble rocks / minerals and transports the minerals within the water current.

(b) Describe how the following features are formed:
(i) Gorge, when a waterfall retreat **(4 mks)**

□ Vertical erosion occurs at the waterfall point.

□ This is due to increase in gradient and the force of falling water.

□ The position of waterfall shifts upstream as resistant rocks are slowly eroded by abrasion and hydraulic action to form a deep narrow valley.

□ This leads to the formation of gorges below a waterfall.

(ii) River braids **(4 mks)**

□ The river flows in the middle or old stage where the valley is wide and gently sloping.

□ River carries a large load in a wide shallow channel.

□ The gradient is low hence making the river to flow sluggishly / low velocity

□ The river deposits its load on the bed.

□ The river bed is gradually raised blocking the flow due to accumulation of sediments into features called shoals.

□ The river sub-divides into channels distributaries / braids across the deposits as the river attempts to flow around the obstacle.

□ Channels created by this process are called river braids.

(c) State four characteristics of a river in the old stage. **(4 mks)**

□ River gradient is low

□ River flows very slowly / reduced velocity

□ Great deposition of aluminum hence constructive work

□ Lateral erosion occurs

□ Seasonal floods are common

□ River has large volume of water

□ River has differed tributaries

□ Has ox-bow lakes

□ Carried a large load/ silt/ alluvium

(d) Explain three significance of a river to human activities. **(6 mks)**

□ Some rivers provide water for domestic and industrial use

□ Fresh water rivers are used for irrigation in dry areas for crop production □ Navigable rivers or their sections provide cheap transport routes.

□ Some rivers are rich in fish hence are fishing grounds

□ Some rivers have been damned to produce hydroelectricity power to run machines.

□ Some river beds and valley are sources of building materials

□ Some alluvial sediments contain valuable minerals which are mined and sold to earn income □ Features formed by rivers e.g. waterfalls attract tourists which earn foreign exchange.

□ Flooding deposits alluvium on source river valleys, deltas, plains which create fertile soils which encourage agriculture. **Any 6 x 1 = 6 mks**

10. (a) What is soil profile? **(1 mk)**

□ This is a vertical arrangement / cross-section of different layers of soil from the surface to the bedrock.

(b)

(i) Name the type of soils found in position R and U. **(2 mks)**

R – Lateritic soils / laterites

U – Peat / Bog

(ii) State two characteristics of soils found in section marked.

I. R **(2 mks)**

□ Laterite soils

□ Red in colour

□ Acidic

□ Rich in iron and alluminium oxides

□ Have low humus content / organic matter

- ☐ Are sticky soil
- ☐ Have developed soil profile
- ☐ Are mature soil
- ☐ Are of low agricultural value.   Any 2 x 1 = 2 mks

II. U   **(2 mks)**

- ☐ Peat / Bog Soils
- ☐ Poorly Drained / Water Logged
- ☐ Grey / Blue In Colour
- ☐ Are Acidic
- ☐ Have Poorly Developed soil profile

(c) (i) Name two components of soil.   **(2 mks)**

- ☐ Air
- ☐ Water / moisture
- ☐ Organic matter / humus
- ☐ Inorganic matter / minerals

(ii) Differentiate between soil structure and soil texture.   **(2 mks)**

- ☐ Soil structure refers to the way soil particles are grouped together into larger particles while soil texture is the size of the individual soil particles.

                              Or

- ☐ Soil structure refers to the grouping / arrangement of soil particles / aggregates while soil texture refers to the size of soil particles / degree of fineness or coarseness of soil particles.

(d) Explain how the following factors influence soil formation.
       (i) Climate   **(4 mks)**

- ☐ Rainfall affects the rate at which some soil forming processes e.g. leaching occur.
- ☐ Rainfall provides water which makes it possible for rocks to decay / disintegrate to form soil.
- ☐ Seasonal variation of rainfall can cause the accumulation/ concentration of salts in the soils.
- ☐ Erosion by water, ice and wind cause formation of thin soils
- ☐ Decomposition of the eroded materials by water, ice, wind lead to formation of new soils / alluvial soils.
- ☐ High temperatures increases the rate of weathering and also accelerate bacterial activities which generate some of the organic matter in soil.
       Vegetation   **(4 mks)**
- ☐ Vegetation provide humus which result from decomposition of plant remains.
- ☐ Plant roots penetrate and break up soils and allow water to pass through or help the soil become porous.

(e) Explain how the following practices cause soil degeneration.
   Burning   **(2 mks)**

- ☐ Burning expose soils to agents of soil erosion
- ☐ Burning kills the micro-organisms thus robbing the soil of its organic matter resulting in deterioration of soil structure
- ☐ Burning dries up the soil because if causes lose of soil water
       Leaching   **(2 mks)**
- ☐ Leaching dissolves soluble minerals in the top soil and the same substances in moved and deposited is the lower payers.
       Over-application of fertilizers   **(2 mks)**
- ☐ Causes changes in the soil PH by increasing acidity
- ☐ Over-application of the fertilizer affect the soil microorganism thus reducing the ability of soil nutrients.

KASSU-JET JOINT EXAMINATION
Kenya Certificate of Secondary Education
312/2
Paper 2
GEOGRAPHY
MARKING SCHEME

1. (a) Name *two* indigenous softwood tree species found in Kenya.   (2 marks)

☐ African pencil/cedar/juniper

☐ Podo

(b) State **three** factors that favour the development of softwood forests in Canada. (3 marks) ☐ Cool/cold climate suitable coniferous forest.

☐ High rainfall/1,000 to 2,000mm.

☐ Thin permafrost soil spares the land for the forest.

☐ Rugged and steep landscape is suitable for growth of coniferous forest/discourage agriculture.

☐ High local and international demand for softwood products.

☐ Availability of land due to low population density.

2. (a) Name the minerals mined in the areas marked **P** and **R**.   (2 marks)   P-Flouspar

R-Titanium

(b) State *three* benefits of Gold mining to the economy of South Africa.   (3 marks)

☐ Provides raw materials for industries.   ☐ Create employment opportunities ☐ Earns foreign exchange. ☐ Led to industrial development ☐ Has led to urbanization.

☐ Development of social amenities. ☐ Development of transport facilities.

3. (a) State **three** factors which led to the growth of Eldoret town.   (3 marks)

☐   Extensive land for expansion of the town.

☐   Strategically located along the Nairobi Kampala road/railway line.

☐   It serves a rich Agricultural hinterland.

☐   The cool climate is ideal for settlement.

☐   Large population provided labour/market.

☐   Undulating/rolling/gentle landscape for construction and agriculture.

☐   Availability of H.E.P.

☐   Investment by local entrepreneurs e.g. athletes.

☐   Establishment of social amenities e.g. schools/hospitals

(b)   State **three** functions of Central Business District in a town.   (3 marks)

☐   It is business/trade centre.

☐   Offers entertainement.

☐   Commercial/banking/insurance centre.

☐   Communication centre.

☐   Administrative centre. ☐ Social and cultural function.

4.(a) State **two** negative effects of tourism in Kenya.   (2 marks)

☐   Importation of luxury items.

☐   Pollution through careless littering of parks.

☐   Ecological disturbance through over use of certain parks/interference of animals behavior.

☐   Soil erosion through trampling of soils by the tour vehicles.

☐   Social evils/crime/drug use and abuse.

☐   Erosion of culture.

☐   Increased poaching of wild animals

☐   Neglect of other sectors of the economy.

(b)   Sate **three** social-economic factors that attract tourists in Switzerland.   (3 marks) ☐ Political stability/peaceful atmosphere/neutrality.

-
-
-
-     Ability to communicate in different languages.
    Culture and tradition like dances and dresses.
    High standard of Hospitality and accommodation hotels/resorts.
    Effective banking system
-     Well developed transport network
-     Low package tours
-     An effective marketing promotion.
-     International headquarters of organizations (meetings)

5. Describe long lining as a method of fishing.   (4 marks)

- Long lines with 500 to 5,000 baited hooks attached to a boat/liner.
- The net is cast into water and spread over long distance on the sea bed.
- The lines are suspended in water by floats at each end.
- The net is dragged along sea bed.
- Once sufficient fish has been caught the lines are hauled into the boat.
- Fish caught are unhooked.
- Hooks are baited once again and then cast back into the water.

SECTION B

*Answer question **6** and any other **TWO** questions from this section.*

6. (a) (i)Draw a divided rectangle 16cm long to represent the prices of sugar in the year 2012.

$$110,873 + 65,172 + 90,649 + 86,832 =$$

353,531   *Length of the bars*

$\frac{110873}{353531} \times 16 = 5.01cm$ =   *5cm*

$\frac{65172}{353531} \times 16 = 2.94cm$ =   *3cm*

$\frac{90649}{353531} \times 16 = 4.10cm$ =   *4cm*

$\frac{86832}{353832} \times 16 = 3.92cm$ =   *4cm*

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A DIVIDED RECTANGLE SHOWING PRICES OF SUGAR IN 2012.

KENYA	TANZANIA	ZAMBIA	SOUTH AFRICA

Title - ½ mark

Segments - 4 Marks

Calculations - ½ mark each = 2 Marks

Total — ½ mark
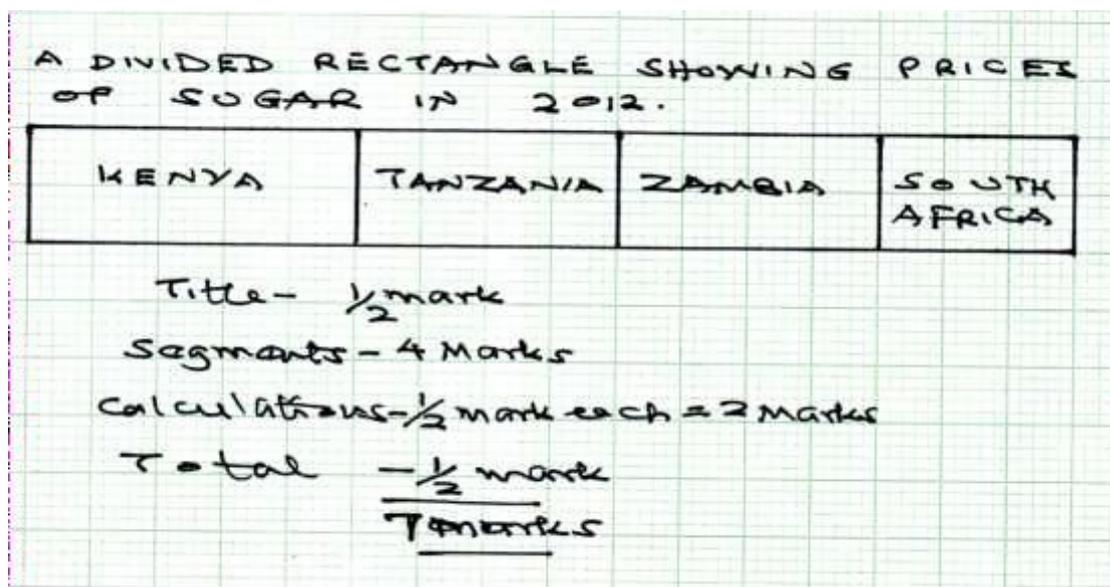
7 marks

(ii) State *two* advantages of using compound bar graphs to present data.   (2 marks)

- It gives a clear visual impression
- It allows for comparison
- Easy to draw/construct
- Easy to read/interpret
- Can be used to represent a wide range of data.
  (b) State **three** physical conditions that favour large scale sugarcane farming in Western Kenya.   (3 marks)
  Well drained soils
- Deep soils
  Black cotton soils/clay soils/alluvial soils.
  High rainfall/1200 - 1500 mm
  Well distributed rainfall throughout the year.
  High temperatures/20^0C - 28^0C
  Long periods of sunlight
  Undulating/gently sloping landscape.

(c) Describe the stages involved in sugar production from harvesting to marketing.   (7 marks)

- The sugarcane is cut at the base using a sharp panga.
- The husks and the top green part are removed.
- The cane is loaded onto lorries/tractors and transported to the factory.
- The sugarcane is weighed.
- The sugarcane is washed with sprayed water.
- The sugarcanes are mechanically cut using rotating knives (shredders) into smaller pieces.
- The pieces are crashed between the rollers to obtain raw juice.

-
-

-
-
-

- □
- □
- □
- □ The juice is boiled with lime and allowed to crystallize to form raw/brown sugar.
- □ The crystals are separated from molasses.
- □ Brown sugar is further refined to give brown and white sugar.
- □ The sugar is dried, graded, weighed and packed ready for sale.

    (d) Explain **three** problems facing sugarcane farming in Kenya.   (6 marks)

- □ Pests such as termites and white grub attack the plants and lowers the yields leading to low income for the farmers.
- □ Diseases such as ratoon stunting, mosaic, smut attack the plants and lowers the yields leading to low income for the farmers.
- □ Accidental fires/fires set by arsonists destroy the cane resulting in heavy losses to the farmers.
- □ Flooding of the local market by cheap imported sugar leads to unfair competition thus causing delayed payments to the farmers.
- □ Delays in harvesting of sugarcane reduces the quality of/tonnage of the cane reducing the farmers earnings.
- □ Closure of some factories such as (Ramisi and Miwani) has deprived farmers of their source of income/annual closure of factories for servicing   of machines disrupts the farmer"s calendar of activities.
- □ Poor feeder roads in some areas leads to delayed delivery of the cane to the factory lowering the quality and subsequently the profit to the farmers.
- □ Prolonged droughts in some areas destroys the crop leading to heavy losses to the farmers.
- □ High cost of farm inputs reduces the farmers profit margins which demoralize them.
- □ Mismanagement of factories and co-operatives leads to delayed payments thus discouraging the farmers.

7. (a) State **two** advantages of written communication.   (2 marks)

- □ Effective in disseminating information.
- □ For marketing/advertisement.
- □ For entertainment.
- □ To educate citizens on government policies.
- □ For certification/reference.
- □ Can be used as official document.

    (b) Use the outline map of East Africa provided to answer questions (i) and (ii).

    (i) Name the towns marked **W** and **X**.   (2 marks)

            W-*Nanyuki*
            X-*Kasese*

 (ii)Name the railway lines marked **Y** and **Z**.   (2 marks)

            Y-*Konza - Magadi*
            Z-*Kisumu - Butere*

(c) (i)State *two* ways in which Kenya would benefit from the construction of the Standard gauge railway.(2 marks)

- □ Employment
- □ Faster mode of transport.
- □ Efficient transport.
- □ Increase trade between East African countries.

- □

- □
- □
- □

□
□
□
Handle bulky goods with ease.
Development of towns/port
   (ii) Explain **three** factors that hinder development of River transport in Africa.   (6 marks)
Seasonality of many rivers i.e. fluctuating river regime.
Presence of rapids and waterfalls along the course of the river.
Many rivers are either too short, shallow and too swift/narrow.

□
□

□
□
□

□
□
□
    Siltation at the river mouths hinders port development.
    Most rivers pass through unproductive areas hence itsuneconomical to develop river transport.
    Presence of floating vegetation and dense vegetation along the river banks making it impossible to navigate through.
□   Differences in political ideologies of countries through which rivers pass which calls for negotiations.
        (d) The map below shows the Great Lakes and St. Lawrence Seaway. Use it to answer question (i) and (ii).
        (i)Name the canals marked **J** and **K**.   (2 marks)
            E-Trent canal
            F-New York State Barge canal
        (ii) Name the towns marked **M, N** and **P**.   (3 marks)
            M-Duluth
            N-Detriot
            P-Buffalo
(ii) Explain **three** measures that were taken to solve the challenges that faced navigation along the Great
        Lakes and St. Lawrence Seaway.   (6 marks)
□   Construction of canals to avoid waterfalls and rapids.
□   Deepening/dredging of the canals and channels to accommodate larger ships.
□   Blasting of the rocky islands.
□   Use of ice breakers during winter when water is frozen.
□   Locks were constructed along the seaway to regulate the flow of water as well as the movement of vessels.
□   Installation of radars and for lights on ships.
8. (a) Differentiate between manufacturing industries from tertiary industries.   (2 marks)
□   Manufacturing industries change raw material into semi-processed/ finished products while tertiary industries provide services to the consumer.
        (b) (i)Name **two** non-food agricultural industries in Kenya.   (2 marks)
□   Textile processing.
□   Leather processing.
□   Tobacco processing.
□   Pyrethrum processing. □ Sisal fibre making.
□   Paper processong
        (ii)State **three** measures that are being taken by the government of Kenya to promote Jua-Kali Industries.
                                                                                        (3 marks)
□   Tax incentives/reduced duty on imported machinery and raw materials.
□   Transport network.
□   Protection from competition.
□   Provision of site.
□   Provision of power/H.E.P.
□   Provision of capital. □ Training.
□   Marketing
□
□
□
□
□

☐
☐
☐
☐   Encourage formation of co-operative societies.

(iii) Describe the characteristics of the cottage industries in India.   (5 marks)

☐   Carried out by individuals/families.

☐   Are rural based.

☐   Work done manually/use of simple machines.

☐   Work in small workshops.

☐   Marketed by middle men.

☐   Products are for both domestic and export market.

     (c) (i)State **three** benefits of decentralizing industries in Kenya.   (3 marks)

    It would encourage regional equality in development.

    Transport and communication.

☐   Social amenities.

    It would create employment in the rural areas.

    It would reduce rural-urban migration.

    It would allow greater exploitation of local resources.

    It would reduce risks during calamities.

    Would reduce strain on social amenities in urban centres.

    Reduce pollution in the main urban centres.

     (ii)Other than iron and steel, name **two** other industries located in Ruhr region of Germany. (2 marks) ☐ Engineering.

☐   Chemical industries/petrol chemical/fertilizer.

☐   Textile industries

☐   Oil refining

☐   Electronics

☐   Food processing

☐   Cutlery and surgical instruments.

(iii) Explain **four** factors which influenced the location of iron and steel industry in the Ruhr region of Germany.

        (8 marks)

☐   The region is centrally located in Europe. This offers easy access of all parts of Europe.

☐   The region is served by navigable rivers like River Rhine and canals which provided cheap transport for raw materials and finished products.

☐   Availability of raw materials it is economical to set up iron and steel industries near the source near the source of raw materials because   they are bulky. The Ruhr region has coal iron ore and limestone.

☐   Existence of traditional industries which led to the development of the necessary skill.

☐   Presence of rich companies/Krupp family which are ready to provide capital for the development of industries. ☐ The region has abundant sources of power such as coal, oil H.E.P which is necessary in iron and steel industries ☐ The dense and affluent population in central and western Europe provide ready market for iron and steel.

9. (a) (i)What is sex ratio?   (1 mark)

☐   This is the number of males per 100 females.

☐
☐

☐
☐

☐

☐

    (ii)   Apart from population census, give **two** other primary sources of population data.   (2 marks) ☐ Registration of births/deaths/Marriages/migration.

☐ Tallying tapes. ☐ Sample surveys.

    (iii)   State **three** significance of population census to a country.   (3 marks)

☐ Provide a basis for national planning and policy making.

☐ Help in planning for job markets, education etc.

☐ Help in planning for food production and distribution.

☐ Reveals the dependency ratio and age-sex composition.

☐ Reveal the occupation of the people thus help in planning for employment and estimating tax levels.

☐ Reveal the trends on fertility and mortality rates hence work out population growth rates.

☐ Help in planning for urban growth and provision for infrastructural facilities.

☐ Help in provision of administrative services and determining of administrative boundaries.

    (b) Explain **four** factors that have led to high population density in the Kenya highlands. (8 marks)

☐ Cool conditions/temp 10 - 20^0c favour growth of cash crops hence   attracting dense settlement.

☐ High and reliable rainfall well distributed throughout the year suitable for agriculture thus attracting dense settlement.

☐ Availability of well drained volcanic soils which favour agricultural production so has attracted dense settlement.

☐ Availability of adequate water supply due to numerous rivers supplying water for domestic, industrial and irrigation in some parts also attract dense settlement.

☐ The numerous plantation and horticultural farms has attracted many people from the neighbouring areas in search of employment hence leading to high population densities.

☐ The presence of developed transport network facilitate quick movement and accessibility hence a lot of economic activities take place leading dense population densities.

    (c)   Describe the characteristics of population represented by the pyramid.   (5 marks) ☐ Number of males and females is almost equal.

Low population growth rate.

Low/decline in birth rate.

☐ Has low mortality rate.

Has high life expectancy.

Low dependency ratio.

    (d)   Explain **three** cause of urban-rural migration.   (6 marks) Decentralization of industries/Job transfers from their places of work if some industries are set up in the rural centres.

Stressful urban life due to high number of people and increase in pollution.

☐ High crime rate and insecurity make life difficult for many hence move back to the villages which is much safer.

☐ Shortage of housing and congestion may force some urban dwellers to find more spacious houses and pleasant living conditions in rural areas.

☐ Retirement where one stops working in town and opt to go back to the village.

☐ Unemployment in the urban centres.

10. (a) (i)Distinguish between visible and invisible exports.   (2 marks)

☐ Visible exports are tangible goods sold to other countries while invisible exports are intangible goods and services that earn foreign   exchange without transfer of goods from one country to another.

    (ii)Name **two** seaports that handle exports in East Africa.   (2 marks)

☐ Mombasa

☐ Dar-es-salaam.

- ☐
- ☐
- ☐
- ☐ Lamu
- ☐ Tanga

(b)Explain **three** measures Kenya can take to reduce her unfavourable balance of trade. (6 marks)

☐ Encourage the Juakali/cottage industries to produce locally manufactured goods for export.

- ☐ Restricting the importation of luxury items through high taxation.
- ☐ Provide incentives for industries to manufacture goods for exports.
- ☐ Establishing of import substitution industries to manufacture goods initially imported and cut down on imports.
- ☐ Protecting local industries from unfair foreign competition from imported goods through quotas and taxation.
- ☐ Development of alternative energy sources to reduce oil importation.
- ☐ Encouraging production of high quality manufactured goods for export in order to earn higher income.
- ☐ Diversifying the agricultural exports to enable the country have a variety of exports.
- ☐ Open up new markets to reduce overdependence on traditional trading partners.
- ☐ Encouraging local assembling of machinery since importation of parts is cheaper.

(c) Explain **three** reasons for low volume of trade between the countries in African (6 marks)

☐ Political instability discourage trade

- ☐ Most countries produce similar goods mainly agricultural or minerals thus low demand.
- ☐ Poor transport and communication links hinder movement of goods.
- ☐ The flow of trade still follows colonial patterns.
- ☐ Industrialized countries have better trade partners as they provide essential manufactured goods while African countries produce mainly agricultural produce.
- ☐ Different political ideologies discourage trade.

(d) (i)State **three** benefits of ECOWAS to the member states. (3 marks)

- ☐ The volume of trade has been boosted as a result of expanded market.
- ☐ More transport facilities e.g. roads have been constructed to link member states.
- ☐ Removal of trade barriers has extended market for the finished products.
- ☐ The transfer of technology or capital within the bloc is enhanced.
- ☐ Cooperation in other fields such as education health is enhanced.
- ☐ The reduction in hostilities between member states has enhanced peace resulting in rapid economic development

(ii)Explain **three** ways in which the future of international trade in Kenya can be improved. (6 marks) ☐ Kenya is exploring new markets in the far East countries to avoid over-reliance on the European market.

- ☐ Kenya has signed trade agreements with various countries in Africa and in America which will help improve trade.
- ☐ Kenya˅s trade with African countries is likely to improve through the membership in trade blocs such as COMESA.
- ☐ Some Kenyan entrepreneurs are setting up branches of their industries in the neighboring countries in order to expand trading activities.

- ☐
- ☐
- ☐
- ☐

☐

☐
☐ Kenya is undertaking partial processing of some of the agricultural products before export in order to add value and thus increase earnings.
☐ Kenya should diversify her export products to attract a wider market for her goods.
☐ Kenya should aggressively advertise her products to attract more buyers.
☐ Kenya should improve her international transport and communication link for efficient transactions.
☐ The implementation of vision 2030 will lead to increased production of industrial goods for export.

NANDI NORTH SUB-COUNTY JOINT PRE

MOCK EXAMINATIONS 2015

312/1
Kenya Certificate of Secondary Education (K.C.S.E.)
GEOGRAPHY
PAPER 1
TIME: 2¾ HOURS
SECTION A

Answer ALL Questions.

1. (a) Name the **three** types of Coasts.   (3mks)
    (b) What are corals?   (2mks)
2. If the local time in town A at longitude 20^0E is 10a.m., what will be the time at town B at longitude 10^0W?
                                                                                                                                    (2mks)
3. (a) What are the characteristics of the soil catena on a steep part of the slope?   (3mks)
    (b) What are the   characteristics of volcanic soils?
                                                                            (4mks)

4.
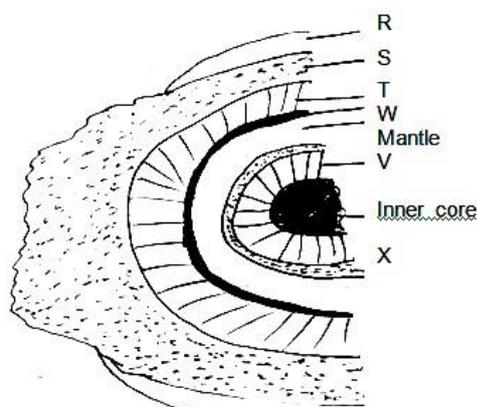
    The diagram above represents the internal structure of the earth. Label the parts marked R, S, T, W, V and X.
                                                                                                                                    (6mks)
5. (a) Identify **three** ways in which river erodes its channel.   (3mks)
    (b)   State **two** types of river erosion.   (3mks)
    SECTION B
    Answer question 6 and any other two questions in this section
6. (a) Study the map provided of MIGWANI (1:50,000) provided and answer the questions that follow.
    (i) Name **two** natural features found in grid square 0862.   (2mks)
    (ii) Name **two** human made features found in grid square 0768.   (2mks)
    (b)   (i) Name **two** ways in which relief has been represented in the map.
        (2mks)
    (ii) Give the six-figure grid reference for Itoloni Dam.   (2mks)
    (c)   (i) Using a vertical scale of 1cm o represent 100 metres, draw a cross section along the northing 67
        from point 050 670 to point 130 670.   (4mks)
    (ii) On it, mark and label the following:-
        • Water pipe line   (1mk)
        • Ikoo   (1mk)
        • Dry weather road   (1mk)
    (iii) Calculate the vertical exaggeration of the cross-section.   (2mks)
    (d)   Citing evidence from the map, give **three** functions of GWANI town.
        (6mks)
    (e)   State **two** types of natural vegetation shown in the area covered by the map.   (2mks) 7.
    (a) (i) Differentiate between a weather station and a Stevenson''s screen.   (2mks)
        (ii) Explain **four** main features of the Stevenson''s screen.   (8mks)

(b) (i) What is precipitation?   (2mks)
    (ii)   What conditions are necessary for the formation of dew?   (3mks)
    (iii) State **three** factors which determine the amount of sunshine received in an area.   (3mks)
    (iv) Describe land breeze.   (5mks)
    (v)   State **two** elements of weather.   (2mks)

8.   (a) (i) What is a rock?   (2mks)
   (b) (i) State **three** classification of rocks according to their mode of formation.   (3mks)
    (ii) Identify **two** examples of rocks mentioned in b (i) above that is formed from the already existing rock materials.   (2mks)
    (iii) List **two** characteristics of rocks.   (2mks) (c) (i) List **two** main types of rocks dominant in Kenya.   (2mks)

(ii) Explain the importance of studying rocks.   (6mks)
   (d) Explain **four** benefits of rocks to the economy of a country.   (8mks)

9.   (a) (i) What is mass wasting?   (2mks)
    (ii) List the **two** broad categories of mass wasting.   (2mks)
   (b) (i) What is soil creep?   (2mks)
    (ii) List **five** factors that cause soil creep.   (5mks)
    (iii) Differentiate between rock slide and soil creep.   (6mks)
   (c) Explain the negative effects of mass wasting on physical and human environments.   (8mks)

10. (a) (i) What is a sea?   (2mks)
    (ii) Give **two** examples of landlocked seas   (2mks)
   (b) (i) Identify **four** sources of mineral salts in oceans.   (4mks)
    (ii)State **three** factors that contribute to differences in ocean salinity.   (3mks)
   (c) (i) List **two** factors that cause vertical movement of ocean water.   (2mks)
    (ii) Explain how earth‟s rotation causes horizontal movement of ocean water.   (3mks)
   (d) (i) Define the following terms:
- Ocean currents   (2mks)
- Tides   (2mks)

    (ii) Classify the following ocean currents to either warm or cold.
- Agulhas
- Oyashio
- Benguela
- Labrador
- Gulf stream

NANDI NORTH SUB-COUNTY JOINT PRE

MOCK EXAMINATIONS 2015

312/2
Kenya Certificate of Secondary Education (K.C.S.E.)
GEOGRAPHY
PAPER 2
SECTION A

Answer ALL Questions.

1. State **three** characteristics of Savanna vegetation. (3mks)
2. (a) Explain the term soil erosion. (2mks)
   (b) List **four** ways in which soil erosion can be controlled. (4mks)
3. (a) Outline **three** human factors that favour tea growing in the Nandi Hills area of Kenya. (3mks)
   (b) State **three** problems experienced in tea farming in Kenya. (3mks)
4. (a) Explain the following terms:
   (i) Fishing (2mks)
   (ii) Fisheries (2mks)
   (b) What **two** benefits does fishing contribute to the Kenyan economy? (2mks)
5. (a) Name **two** minerals mined in Kenya. (2mks)
   (b) Give **two** reasons why Gold mining in Kenya has not been fully exploited. (3mks)
   SECTION B
   Answer question 6 and any other two questions in this section
6. (a) The table below shows green tea volumes delivered to Chebut tea factory by various Lorries versus the acreage from which the tea was plucked. Use the data to answer the questions that follow.

Lorry	Tea delivery in kgs	Acreage from which green tea was picked.
A	2,000	20
B	8,240	43
C	11,000	70
D	5,300	35
E	5,700	30
TOTAL	32,240	

   (i) Draw a pie-chart with a radius of 5cm to represent the green tea deliveries by the various Lorries. Show your calculations. (6mks)
   (ii) State **two** disadvantages of using the above method in presenting data. (2mks)
   (iii) Identify **three** other methods that can be used to present the above data. (3mks)
   (b) Students from Kamobo secondary school in Nandi Central Sub-county went to study tea growing in Nandi Tea Estate.
   (i) State any **two** preparations made before the field study. (2mks) (ii) Give any **two** follow-up activities the students are likely to engage in after the study. (2mks) (iii) Identify three factors that favour tea growing in Nandi Tea Estate that the students might have found. (3mks)
   (c) (i) State **three** problems that the students are likely to have encountered during their Nandi Tea estate visit? (3mks)
   (ii) Explain **two** ways in which the students would have presented their findings from the study in (b) above. (2mks)
7. (a) Differentiate between land reclamation and land rehabilitation. (2mks)
   (b) (i) List **three** was in which tsetse fly menace has been controlled in the Lambwe (3mks) Valley.
   (ii) Name **two** areas in Kenya where swamps have been reclaimed. (2mks)

(iii) State **four** factors which influenced the establishment of Perkerra Irrigation Scheme. (4mks)

(c) You intend to carry out a field study on Budalangi Flood control.

(i) Name **two** methods that have been used to control flooding in Budalangi. (2mks)

(ii) Give **three** reasons why flood control in Budalangi is important. (3mks)

(iii) List **three** activities that you would undertake prior to the study. (3mks)

(iv) Explain **three** methods that you would use to present your findings after the study. (6mks)

8. Use the map of East Africa below to answer question (a) (i) below.

i. (i) Name the National Parks P, Q and R. (3mks)

(ii) Differentiate between a game sanctuary and an animal orphanage. (2mks) ii.

(i) State and explain **three** measures being undertaken in Kenya to conserve wildlife. (6mks)

(ii) List **four** problems facing Tourism in Kenya.
(4mks)

(iii) Name **three** tourist destinations in Uganda. (3mks) iii. (i) What is ecotourism? (2mks)

(ii) State **one** community in Kenya engaged in ecotourism. (1mk)

(iii) Outline **four** significance of tourism to an economy of a country. (4mks)

9. (a) Give **three** advantages of using solar energy. (3mks)

(b) Identify the hydro-powered stations marked A, B and C in the diagram below. (3mks)
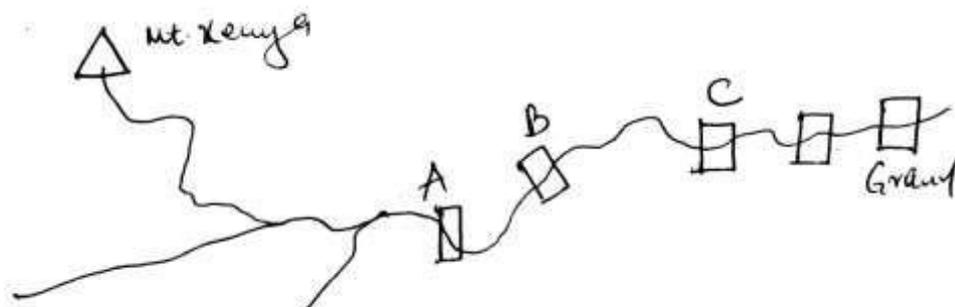
(c) Explain any **five** ways in which energy contributes to the growth of the economy. (10mks)

(d) (i) Discuss any **three** problems associated with energy crisis. (6mks) (ii) Suggest any **three** ways to minimize energy wastage. (3mks)

10. (a) Define the term „Industrial Conurbation." (2mks)

NANDI NORTH SUB-COUNTY JOINT PRE

   (b) State **three** human factors that are considered when siting an industry.   (3mks)

   (c) (i) List **two** types of industries found in an agricultural zone.   (2mks)

       (ii) Discuss **three** significances of industries to the Kenyan economy.

(6mks)

   (d) Students of St. Thomas secondary school intends to carry out a field study on types of industries found in Kabiyet centre.

     (i) State **two** hypotheses that they would make on their study.   (2mks)

     (ii) Describe what activities they will undertake before the study till they conclude their study.   (6mks)

     (iii) Identify **two** significances of their study.   (2mks)

MOCK 2015

   312/1
   GEOGRAPHY
   PAPER 1
   MARKING SCHEME

1. (a) <u>Types of coasts</u> ☐

Submerged coasts

☐ Emerged coasts

☐ Coral coasts   (3 x 1 = 3mks)

(b) Corals are limestone rocks made up of exoskeletons of tiny marine organisms called polyps. (1 x 2 = 2mks)

2. Difference in longitudes $20^0E + 100W = 30^0$

   $1^0 =$ 4 min

   $30^0 =$? 30^0 x 4 min =120min=2 hours

   10a.m. – 2 hours   =8.00a.m.   (1 x 2 = 2mks)

3. (a) <u>Characteristics of the soil catena on steep part of the slope.</u>

☐ Thin soil / shallow soil.

☐ Stony / large solid particles.

☐ Infertile soil with low mineral nutrients.

☐ Dry soil.   (1 x 3 = 3mks)

(b) <u>Characteristics of volcanic soils</u> ☐

They are fine textured.

☐ They are rich in mineral nutrients.

☐ They are grey / red in colour.

☐ They are formed by weathered lava.

☐ The soils are sticky when wet.   (1 x 4 = 4mks)

4. R – Hydrosphere (Oceans and Seas)

   S – Sial

   T – Sima

   V – Outer core

   W – Mohorovicic discontinuity / Moho.

   X – Gutenberg discontinuity.   (1 x 6 = 6mks)

5. (a) <u>Three ways in which a river erodes its channel.</u>

☐ Hydraulic process

- ☐ Abrasion process
- ☐ Solution process
- ☐ Attrition process   (1 x 3 = 3mks)

(b) Types of river erosion

- ☐ Headward erosion
- ☐ Vertical erosion
- ☐ Lateral erosion   (1 x 2 = 2mks)

6. (a)

(i)

- ☐ Scrub
- ☐ Scattered trees.   (1 x 2 = 2mks)

(ii)

- ☐ Culvert Bridge
- ☐ Houses
- ☐ Dry weather road.   (1 x 2 = 2mks)

(b) (i) - Contours.

    - Trigonometrical stations.   (1 x 2 = 2mks)

      (ii) Six-figure grid reference for Itoloni Dam.

- ☐ 942781
- ☐ Allow ± 1

A CROSS-SECTION OF HE LAND ALONG THE NORTHING 67 FROM POINT 050670 TO POINT 130670

Marks distribution

Title   -   1mk

Trend   -   1mk

Starting point   -   1mk

Ending point   -   1mk

Features – each 1 mark x   3mks

3 =

    (iii) Vertical   =   Vertical Scale

Exaggeration (VE)

                      Horizontal scale

                 =   1cm rep 100m

    V.C

                   1:50,000

= $\dfrac{1}{100 \times 100} \div \dfrac{1}{50,000}$

= $\dfrac{1}{50,000} \times \dfrac{1}{10,000}$ 1

NANDI NORTH SUB-COUNTY JOINT PRE

V.E = 5 times

(c) Functions of Gwani Town

☐ Administrative – Chief's office ☐ Commercial / Trade – shops.

☐ Medical care – Health centre.

☐ Tourist centre – Rest house.   (1 x 3 = 3mks)

(d) Natural vegetation

☐ Scrub

☐ Scattered trees   (1 x 2 = 2mks)

7. (a) (i) Weather station is a place where all the elements of weather are observed, measured and recorded, while Stevenson's screen is a wooden box designed to house thermometers and hygrometer (dry and wet). Used to measure temperature and humidity respectively.

   (ii) Features of Stevenson's screen.

☐ The screen is painted white, in order to reflect the direct rays of the sun.

☐ The screen has louvered sides with slats, so as to allow the free flow of air into and out of the box, this is to avoid the build up heat in it.

☐ The screen is made of wood, so as not to absorb heat from the sun.

☐ The screen is raised off the ground so as to allow the measurement of temperature of air and not that of the ground.

☐ The screen has a double roof to prevent the sun's heat from reaching the inside of the screen.

   (any 4x2 = 8mks)

(b) (i) Precipitation is a general term used to describe all forms of moisture which settle out of the atmosphere to the earth's surface.   (1 x 2 = 2mks)

(ii) Conditions necessary for the formation of dew ☐ Air should be calm for a long time.

☐ Day time should be warm.

☐ Nights should be cloudless.   (3 x 1 = 3mks)

(iii) Factors determining amount of sunshine received:

☐ Latitude

☐ Cloud cover

☐ Position of the earth is its revolution around the sun.   (3 x 1 = 3mks)

(iv) Land breeze

☐ Land breeze refers to light winds which move from the land to the sea.

☐ It occurs at night.

☐ High pressure develops on land, while the sea has low pressure.

☐ Winds that blow from the land to the sea are referred to as land breeze.   (5mks) (v)

Elements of weather

☐ Temperature

☐ Rainfall

☐ Atmospheric pressure

☐ Wind

☐ Sunshine

☐   Cloud cover

☐   Humidity.   (1 x 2 = 2mks)

8. (a) A rock is any naturally occurring aggregate of mineral particles of the earth‴s crust. (b)

(i) Classification of rocks according to their mode of formation.

☐   Igneous rocks

☐   Sedimentary

rocks ☐ Metamorphic

rocks

(ii) Three examples of rocks mentioned in b (i) above that is formed from the already existing rock materials. ☐

Limestone

☐   Coal

☐   Diatomite

☐   Iron stone   (any 3x1 = 2mks)

(iii) Characteristic of rocks

☐   Colour

☐   Chemical composition

☐   Resistance / hardness / softness

☐   Crystalline   (any 2x1 = 2mks)

(c) (i) Types of dominant in Kenya.

☐   Sedimentary

☐   Volcanic   (1 x 2 = 2mks)

(ii) The importance of studying rocks.

☐   Helps us to understand how soils are formed.

☐   Helps us to determine the availability of minerals in an area.

☐   Helps to tell the nature of surface relief.   (any 3x2 = 6mks)

(d) Benefits of rocks to the economy of a country.

☐   Some rocks attract tourists earning foreign exchange.

☐   Rocks weather down to form fertile soils which support agricultural activity.

☐   Some rocks contain minerals which are exploited and exported and bring huge income to the country‴s

economy. ☐ Some rocks are used as raw materials in building and construction industry.

☐   Some rocks e.g. soap stone is used for sculpturing.   (any 4x2 =

8mks)

9. (a) (i) Mass movement is the movement of materials down the slope after such minerals have been   lubricated

by the rain water.

   (ii) Broad categories of mass wasting

☐   Slow movement

☐   Rapid movement

(b) (i) Soil creep is downward movement of fine particle on a gentle slope.

(ii) Factors causing soil creep ☐ Heating and cooling of soil.

☐   Alternate drying and wetting of the soil.

☐   Trampling or burrowing of animals.

☐   Shaken by earthquakes or heavy trucks.

☐   Ploughing downhill.

   (iii)

☐   Rockslide involves movement of large masses of rocks while soil creep involves movement of soil or fine
    materials.

☐   Rock slide occurs on a very steep slope while soil creep occurs on a gentle slope.

☐   Rock slide fast speed while soil creep has a very slow speed.

- Rock slide has surface rocks sliding over slip surface while soil creep has heating and cooling of soil as ideal conditions.
- Rock slide is a localized movement while soil creep is an intermittent movement.   (any 3x2 = 6mks)

(c) Negative effects of Mass wasting
- Mass wasting causes rock fall or rock slide which leads to loss of life.
- Mass wasting such as landslide or rock fall destroys property such as transport, communication lines and other buildings.
- Mass wasting facilitates soil erosion by removing soil / vegetation cover, which make it unsuitable for agricultural activities.
- Mass wasting leads to permanent scars on the landscape making I physically unsuitable for human settlement.

(any 4x2 = 8mks)

10. (a) (i) A sea is a large body of saline water on the continental margins.   (1 x 2 = 2mks)
   (ii)
- Caspian sea
- Aral sea
- Dead sea

(b) (i) Sources of mineral salts in oceans.
- Rivers draining in oceans bring in dissolved mineral salt s.
- Most salts were present during the formation of oceans.
- Oceans bedrocks contain salts which dissolve in sea / ocean water.
- During eruption, volcanic materials released bring in a lot of salts.

   (ii) Factors that contribute to differences in ocean salinity.
- Upwelling / mixing of water in the ocean.
- Different temperatures of ocean water.
- Amount of fresh water added into the ocean water from rivers, rainfall or melting ice.

(c) (i) Factors causing vertical movement of ocean water.
-       Convergence of different ocean currents.
-       Differences in the density of ocean water.
   (ii) How earth‟s rotation causes horizontal movement of ocean water.
-       Earth‟s rotation causes deflection / change in direction of winds and ocean currents. ▢ In the northern hemisphere, ocean currents are deflected to the right.
-       In the Southern hemisphere, they are deflected to the left, thus causing horizontal movement. (any 3x1 = 3mks)

(d)
-       Ocean current is a large mass of water flowing in certain direction with uniform temperature through a slower moving or still water with different temperatures.   (1 x 2 = 2mks)
-       Tides are the periodic rise and fall in the level of the ocean / large water bodies.   (1 x 2 = 2mks) ▢ Agulhas (Mozambique) – Warm currents.
-       Oyashio – cold current.
-       Benguella – cold current.
-       Labrador – cold current.
-       Gulf stream – warm current.

NANDI NORTH SUB-COUNTY JOINT PRE-MOCK 2015
312/2
 GEOGRAPHY
PAPER 2
 MARKING SCHEME

1. Characteristics of Savannah vegetation ▯
Consists of grass and trees.
▯   Wetter areas consist of tall scattered trees or woodland.
▯   Some trees are deciduous.
▯   Most trees have umbrella shape.
▯   Some trees have small leaves to reduce transpiration.
▯   The dominant grass species is the elephant grass and the kikuyu grass.
▯   There are tall trees, thick bushes and riverine trees along river valleys.
▯   There are scattered baobab trees and other drought resistant trees.   (any 3x1 = 3mks)

2. (a) Soil erosion refers to the process by which the top soils carried away from part of the earth to another by agents of erosion such as moving water, glacier and wind. (b) Planting cover crops. ▯
Cutting of terraces
▯   Constructing of gabions.
▯   Ploughing across the slope or along the contours.
▯   Practicing correct carrying capacity.
▯   Afforestation and reafforestation.   (any 4x1 = 4mks)

3.
▯   Adequate labour to pluck the tea.
▯   Good roads o the factory and to the market.
▯   Tea factories are located close to the tea plantations thus minimizing wastage.
▯   Availability of capital for paying workers, planting, weeding and land preparation. (any 3x1 = 3mks)

4. (a) Fishing
▯   Act of catching fish and other acquatic animals.
▯   Encompasses all efforts of managing and harvesting aquatic animals in both inland and sea waters. (2 marks for correct explanation)
▯   Fisheries
▯   Refers to an area or a place where fish are received or caught in numbers.
▯   Includes places where fish are bred either for subsistence or commercial purposes.
   (correct explanation – 2 marks)

(b)
▯   Source of employment

▯   Source of food.
▯   Sources of raw materials for one chemical industry.
▯   A source of foreign exchange.
▯   It has led to development of other industries.   (any 2x1 = 2mks

5. (a)
▯   Trona
▯   Limestone
▯   Coal
▯   Flouspar   (any 2x1 = 2mks)
   (b)
▯   Inadequate capital.
▯   Low Gold deposits / not economically viable for exploitation.
▯   Gold is found in few areas e.g. riverbed of river Turkwell and in Kakamega.
▯   No adequate exploration on gold has been done.   (any 2x1 = 2mks) **SECTION**

6. (a) (i)   A   = $\frac{2000}{}$ x 360^0 = 22.3^0 ✓

32240

$$B \quad = \quad \frac{8240}{32240} \times 360^0 \quad = \quad 92^0 \checkmark$$

$$\frac{11,000}{32240}$$

$$C \quad = x\ 360^0 = \quad 122.8^0 \checkmark$$

$$D \quad = \quad \frac{5300}{32240} \times 360^0 \quad = \quad 59.2^0 \checkmark$$

$$E \quad = \quad \frac{5700}{32240} \times 360^0 \quad = \quad 63.6^0 \checkmark$$

A Piechart showing green tea deliveries to Chebut Tea Factory.

□ A
■ B
□ C
□ D
■ E
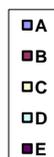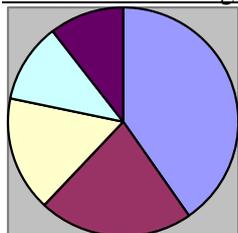
☐ Radius must be exactly 5cm.

(ii)

☐ Its construction requires a lot of calculation.

☐ Small quantities of decimals may not be easily represented.

☐ They do not show the trend.   (2 x 1 = 2mks)

(iii)

☐ Simple bar graph ☐ Proportional circles.

☐ Simple line graph   (3 x 1 = 3mks)

(b) (i)

☐ Seeking permission

☐ Reading materials on Tea production / journals.

☐ Conducting pre-visit.

    (ii)

☐ Discussions / growing lectures.

☐ Preparation of reports

☐ Presenting their finds.   (any other relevant answer)   (2 x 1 = 2mks)

    (iii)

☐ Cool to warm temperature of about 21^0C favours growth of tea.

☐ Well drained soils.

☐ Hilly areas shield the tea from strong and violent winds.

☐ Adequate cheap labour.

☐ Availability of factories to process tea.

☐ Good transport network.

☐ Availability of capital.   (any 3x1 = 3mks)

(c) (i)

- Language barrier
- High temperatures
- Tiredness while walking in the estate.
- Getting hurt by pruned tea. (any 3 relevant)   (3x1 = 3mks) (ii)
- Students could have displayed photographs taken during the study.
- Discussions on the findings of the study could have been held.
- Displaying of graphs on quantity of tea produced.   (any 2 well explained x 2 = 4mks)

7. (a) Land reclamation is the process by which wasteland is converted into farmland for growing crops and keeping animals while land rehabilitation is the process of restoring land to its former productive state which had been lost due to human and physical factors such as erosion.

   (b) (i)
- Sterilization of male tsetse flies.
- Clearing of tsetse fly breeding areas.
- Trapping of tsetse flies by use of nuts.
- Spraying with insecticides.   (any 3x1 = 3mks)

      (ii) - Yala
          - Bunyala   (2 x 1 = 2mks)

(iii)
- Presence of River Perkerra which provided water for irrigation.
- Gently sloping land allow natural flow of water to the fields of gravity. It also enabled mechanization.
- Soils rich in mineral nutrients enabled variety of crops to be grown.
- Availability of extensive land enabled large-scale cultivation.
- Semi-arid land necessitating irrigation farming.
- Sparse population due to pastoral lifestyle made easy for the scheme to be established. □ Large population of ex-detainees needed to be occupied in a productive way.

   (c) (i)
- Construction of embankments or floodways.
- Building of dykes
- Construction of dams in the streams to hold excess water.   (2 x 1 = 2mks)

 (ii)
- To control the speed of water.
- To control the volume of water flowing downstream.
- To keep the surrounding areas free from flooding.
- To minimize waterborne diseases.
- To control contamination of wells and other sources of drilling water.   (any 3x1 = 3mks)

   (iii)
- Locating Budalangi on Atlas maps.
- Reading books of geography on flood control.
- Forming discussion groups before undertaking the study.
- Pre-visit.
- Seeking permission.   (any 3x1 = 3mks)

(iv)
- Displaying photographs taken.
- Drawn sketch maps to be displayed.
- Notes taken while in the field is discussed.
- Prosecuting the findings as reports in note form.

☐   Summary of findings can be put on a table format.   (any 3x1 = 3mks)

8. (a)
     (i)   P – Kiunga Marine
           Q – Maasai Mara
           R – Murchison falls
     (ii) A game sanctuary is an area that has been set aside for the protection of birds or other kinds of animals while an animal orphanage is an area / p lace set aside to protect endangered species of birds and animals e.g. Irola antelope, white rhino and others.   (any 2x1 = 2mks)

     (b)
     (i)
☐ Established of game reserves, national parks and game sanctuaries – they have been gazetted to enjoy government protection.
☐ Ban on game hunting – hunting wild game has been outlawed in Kenya in order to preserve wildlife e.g. International trade in ivory has been banned.   (2 x 2 = 4mks)
☐ Establishment of game ranches – this has been done to enable exploitation of wildlife for meat and other products.
☐ Creation of anti-poaching units – anti-poaching
     (ii)
☐ Poaching
☐ Human activities e.g. grazing of domestic animals in parks, pollution of the environment. ☐ Wildlife – human conflict.
☐ Overgrazing
☐ Bush fires
☐ Adverse climatic conditions
☐ Inadequate capital
☐ Human conflict
☐ Pests and diseases   (any 4x1 = 4mks)
     (iii)
☐ Kipendo Valley National Park
☐ Murchidon falls National Park
☐ Semliki Natioanl Park
☐ Ruwenzori National Park
☐ Queen Elizabeth National Park
☐ Lake Mburo National Park
☐ Mgalunga Gorilla National Park
☐ Mt. Elgon National Park

(c) (i) Ecotourism – is tourism combined with the conservation of the environment. Ecotourism aims at caring and preserving nature.   (2 x 1 = 2mks) (ii)

☐   Maasai
☐   Samburu
☐   Turkana
☐   Rendile
☐   Orma   (1 x 1 = 1mk)
     (iii)
☐   Has earned the country foreign exchange. ☐ Source of revenue for the government.
☐   Has led to improvement of infrastructure.
☐   Has led to conservation of wildlife and protection of historical sites.
☐   Has promoted international relations.

□   Has led to expansion of training institutions.   (any 4x1 = 4mks)

9. (a)

□   Inexhaustible □ Versatile – many uses.

□   Reduce dependence on oil.

□   Cheap / free access everywhere.

□   Minimum maintenance cost.

□   Environmental friendly

□   Can be stored.   (3 x 1 = 3mks)

(c) A – Masinga. B
      – Kamburu
      C – Kindaruma

(d)

□   Industrial growth – creation of employment / goods.

□   Transport – employment / enables trade.

□   Agriculture e.g. tractors etc – enhances food production.

□   Water supply – for domestic and industrial use.

□   Health – used in x-rays thus health workforce.   (any 5x2 = 10mks)

(d) (i)

□   Reduced industrial production – lead to shortages / loss of unemployment.

□   Increased prices / fares – limit purchase travel.

□   Domestic problems e.g. darkness / cooking etc – lead to reduced standards of living, (any 5x2 = 10mks)

(ii)

□   Putting off gadgets not in use.

□   Keep gadgets in good working condition.

□   Use of public transport.

□   Increase capacity of public vehicles.

□   Better mails – to avoid traffic jams etc.

□   Use fewer lighting bulbs.

□   Minimize outdoor advertising i.e. billboards.

□   Use energy saving jikos / stores.

□   Use low capacitycars.   (any 3x1 = 3mks)

10. (a)

□   Transport and communication.

□   Power

□   Market

□   Labour

□   Government policies

□   Capital

□   Industrial inertia   (any 3x1 = 3mks)

(c) (i)

□   Food processing industries – milk or dairy.

□   Agricultural non-food processing industries e.g. textile industry.   (any 2x1 = 2mks)

(ii)

□   earns the country foreign exchange.

□   Has offered employment opportunities.

□   Led to improvement of infrastructure.

□   Increased agricultural production.

□   Improved balance of trade.

□ Diversification of the economy.
□ Diversification of the economy.
□ Has fostered good international relations.
□ Has led to growth of settlements.
      * Well explained three points.   (any 3x2 = 6mks)

(d) (i)

□ Scrap metals are the main raw materials used by juakali artisans.
□ Industrial products are mainly sold in the local market.
□ Lack of market is the major problem that the Juakali artisans face.   (any 2x1 = 2mks)

(ii)

□ Seek permission
□ Conduct pre-visit.
□ Assembly of required equipment.
□ Preparation of work schedule.
□ Preparation of questionnaires.
□ Work group.   (any three well explained x 2 = 6 marks)

(iii)

□ Breaks classroom monotony
□ Improves observation, analyzing skills.
□ Reinforces what is learned in the classroom.
□ Portrays creation of geography.   (any 2x1 = 2mks) **MACHAKOS COUNTY KCSE TRIAL & PRACTICE EXAMINATION 2015**

Kenya Certificate of Secondary Education (K.C.S.E)
312/1
GEOGRAPHY
Paper 1

SECTION A
Answer all the questions in this section

1.   a) What is the solar system?   (1 marks) b) State three planets that have satellites.   (3 marks)
2.   a) Differentiate between meteors and meteorites.   (2 marks) b) State three differences between latitudes and longitudes.   (3 marks)
3.   a) State three causes of the earth movements   (3 marks) b) List two features resulting from horizontal earth movements.   (2 marks)
4.   Carefully study the diagram below and use it to answer question below.
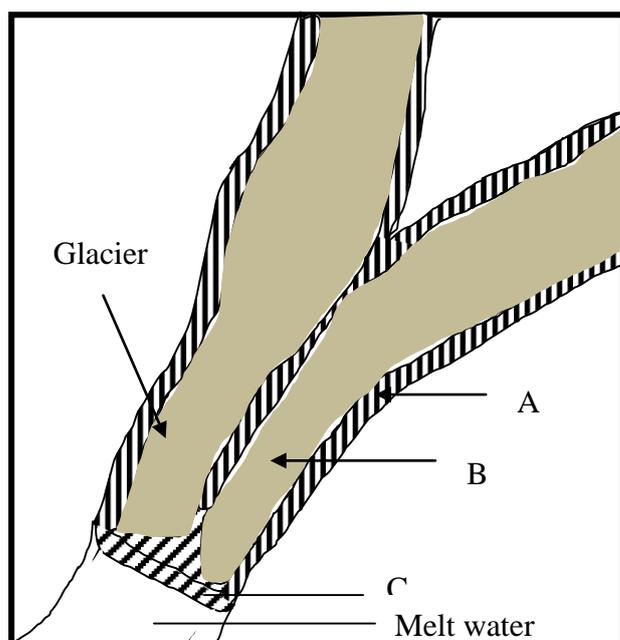
a) Identify the parts A, B, C. (3 marks)
b) State two factors that influence the rate of ice movement. (2 marks)
c) State two conditions that lead to glacial deposition. (2 marks)

5. a) Name two plains found in Kenya. (2 marks) b) State two ways in which plains are formed (2 marks) **SECTION B**

Answer question 6 and any other two questions in this section

6. Study the map of Karatina sheet 121 / 3, scale 1: 50, 000 provided and answer the following questions.

a) i) What was magnetic declination of the map as at January 1992? (1 mark) ii) Give the latitudinal and longitudinal extent of the area covered by the map. (2 marks) b) i) Apart from contours, name one other method used to show relief in the area covered by the map.(2 marks)

ii) Calculate the area of Mt. Kenya forest reserve within Kirinyaga District shown on the map. Give your answer in square kilometers.

(2 marks) c) i) Apart from houses , name two human made features in grid square 8755. (2 marks) ii) Assume that four people live in each house in grid square 8755. Calculate population density. (2 marks) d) Describe the flow of River Sagana. (3 marks)

e) i) Using evidence from the map identify two farming activities taking place in the area covered by the map.
(2 marks)

ii) Explain three factors which have influenced any of the farming activities qualified in (e) (i) above.(9 marks)

7. (a) (i) State three causes of faulting? (3 marks)
(ii) Differentiate between a normal and reverse fault (2 marks)
b) With the aid of well labeled diagrams describe how a rift valley can be formed by Compressional forces.
(7 marks)
c) Explain three effects of faulting (6 marks)
d) You carried out a field study on faulting in the Rift Valley of Kenya. (2 marks)
i) State two objectives for the study you carried out. (2 marks)
ii) Give three follow – up activities you may have engaged in. (3 marks)

8. (a) What is a river catchment ? (2 marks)
(b) State three conditions which lead to the rejuvenation of river. (3 marks)
(c) Explain how a river capture occurs. (8 marks)
(d) i) Describe four processes by which a river transports its load. (8 marks)
ii) List four characteristics of a flood plain. (4 marks)

9. (a) Differentiate weather and weathering. (2 marks)
(b) How can rocks be broken up by physical weathering (6 marks)

(c) List five processes through which chemical weathering takes place (5 marks)

(d) i) What is mass wasting. (2 marks)

ii) State four factors that influence mass wasting (4 marks)

iii) Explain the positive effects of mass wasting to human. (6 marks)

10 a) i) Apart from rain and ice, name two other sources of underground water. (2 marks)

ii) Explain how the following factors influence the existence of ground

water.

☐ Nature of the rocks (2 marks)

☐ Vegetation cover (2 marks)

iii) Distinguish between phreatic and vadose zone (2 marks)

b) The diagram below represents features in a limestone area.
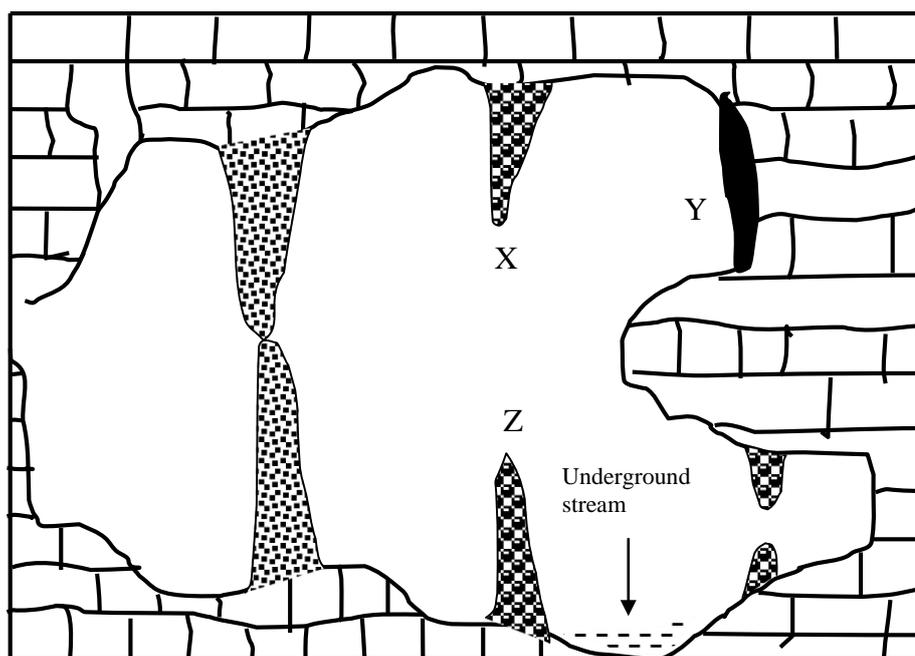
i) Name the features marked X, Y and Z. (3 marks)

ii) Describe how limestone pillar was formed (5 marks)

c) You are supposed to carry out a field study of an area eroded by underground water.

i) Name two surface features you are likely to identify during the field study (2 marks)

ii) State four reasons why you would prepare a work schedule (4 marks)

iii) Give three follow –up activities you would engage in: (3 marks)

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312/2
GEOGRAPHY
PAPER 2

SECTION A: (25 Marks)
Answer all the questions in this section (a)
1.   Use the map of Lake Victoria below to answer question (a)
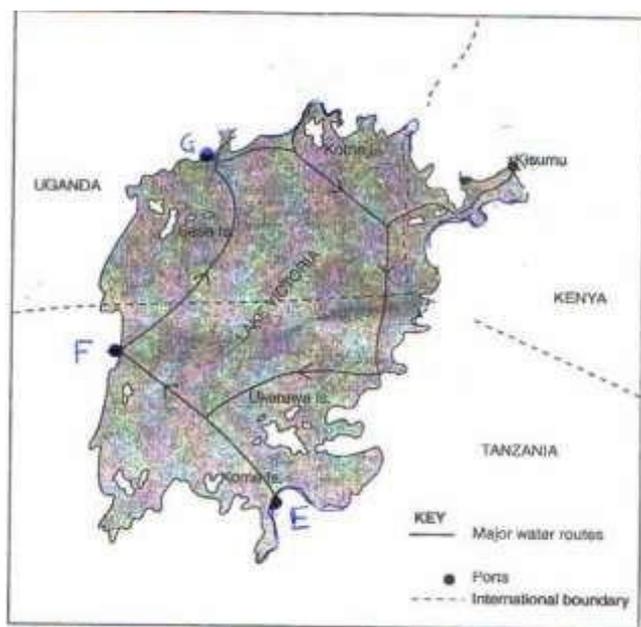
    (a) Name the lake ports marked E, F and G. (3 marks)

    (b) State **two** reasons why the use of waterways from Kisumu to other lake ports has tremendously declined.

    (2 marks)

2.   Give **four** reasons why the use of solar energy is becoming popular and widespread in Kenya (4 marks)

3.   (a) Name **two** types of underground mining apart from deep shaft mining. (2 marks)

    (b) State **two** problems associated with deep shaft mining. (2 marks)

4.   (a) State **three** reasons why the government encourages Afforestation programmes in the country. (3 marks) 5. (a) Identify the **three** main functional zones of an ideal urban centre. (3 marks)

    (b) Outline **four** differences between the functions of Kisumu town and Nairobi City. (4 marks)

    SECTION B:

    Answer question 6 and any other two questions in these sections.

6. The table below shows the values in terms of billions US Dollars of Kenya"s import and export between the years 2003 and 2008. Use it to answer question (a) (i) and (ii).

VALUE OF KENYA"S IMPORTS AND EXPORTS

YEARS	VALUE IN BILLIONS US DOLLARS	
	IMPORTS	EXPORTS
2003	3.00	2.10
2004	3.70	2.50
2005	4.10	2.58
2006	5.10	3.17
2007	6.60	3.60
2008	8.54	4.10
TOTAL	31.04	18.05

(a)   i) Calculate the balance of payment in the year 2008. (2 marks)

    ii) Using a scale of 1 cm to represent 1 billion, draw a simple comparative bar graph based on the data above.

    (8 marks)   iii) State **four** reasons why Kenya"s exports are generally low. (4 marks) (b) i) List **three** major imports to Kenya from Japan. (3 marks)

    ii) Explain **four** measures the Kenya government is taking to reduce the unfavorable balance of trade.

(8 marks)

7. (a) i) Name **two** species of coffee grown in Kenya. (2 marks)

ii) Explain how the following factors favour coffer growing in the central Highlands of Kenya.

☐ High Altitude; (2 marks)

☐ High Population. (2 marks)

(b) i) Explain **three** ways in which government promotes coffee growing in Kenya. (6 marks)

ii) Compare coffee growing in Kenya and Brazil under the following.

☐ Marketing; (2 marks)

☐ Climatic hazards; (2 marks)

(c) Suppose you carried out a field study on a coffee plantation;

i) State **three** problems facing coffee farmers you are likely to observe during the field study. (3 marks) ii) Give **two** methods you would use to collect data other than observation. (2 marks)

iii) In what **two** ways will you advice farmers to avert the problems identified in (c) (i) above? (4 marks) 8. The pyramid below represents the population structure of a developed country. Use it to answer question (a).
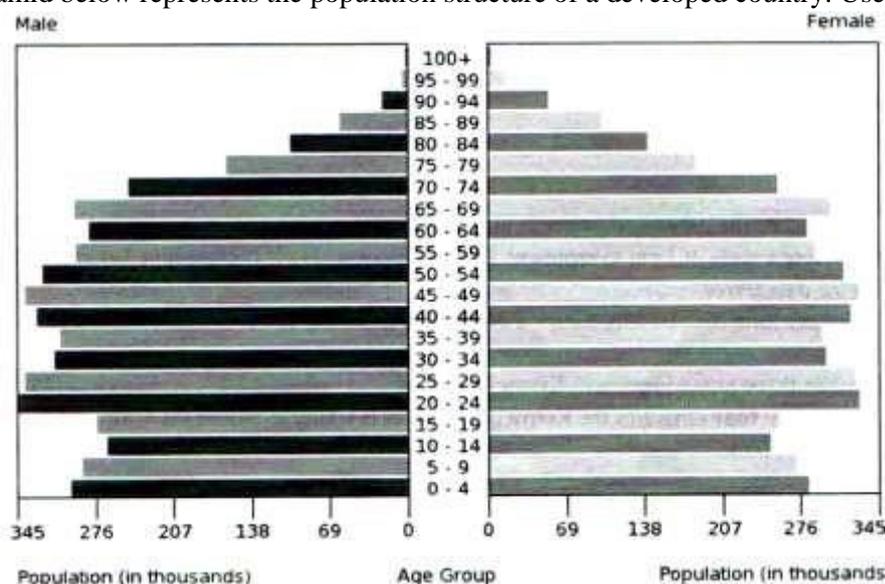
(a) Describe the characteristics of the population represented by the pyramid. (5 marks)

(b) i) Name **two** documents from where the information above may have been obtained other than census reports. (2 marks)

ii) State **four** reasons why it is important for a country to carry out a population census. (4 marks)

(c) Explain **four** consequences of slow population growth rate to a country. (8 marks)

(d) Explain t**hree** economic factors that influence population distribution in East Africa. (6marks)

9. (a) i) What is domestic tourism? (2marks)

ii) State **four** reasons why the government is encouraging domestic tourism. (4marks)

(b) i) Apart from establishing national parks and game reserves, outline four ways in which wildlife is being conserved in Kenya. (4 marks) ii) State **three** reasons why national parks and game reserves have been established in Kenya. (3 marks) (c) Explain **three** ways in which the Masai Mara game reserves benefits the local Maasai community. (6marks)

(d) Explain **three** ways in which the future of tourism can be improved in Kenya. (6 marks)

10. (a) i) What is industrialization ? (2 marks)

ii) State **three** reasons why some industries consider regular supply of water as the main reason for their location. (3 marks)

(b) Outline **four** similarities between Jua Kali industry in Kenya and cottage industry in India.(4 marks)

(c) Explain **three** factors that have influenced the location of iron and steel industry in the Ruhr region of Germany in the 19th century.   (6 marks)

(d) You intend to carry out a field study of a heavy manufacturing industry;

   i) State **three** effects of the industry on the environment you are likely to observe.   (3 marks)   ii) Design a working programme (schedule) you would use during the day of study.   (4 marks)   iii) State **three** reasons why it is important to prepare a working programme (schedule) for the   study.

                                                                                                            (3 marks) **MACHAKOS COUNTY KCSE TRIAL & PRACTICE EXAMINATION 2015**
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GEOGRAPHY
PAPER 1
CONFIDENTIAL
Every school shall make available the Topographical Map of KARATINA sheet 121/3 scale 1:50,000 for the compulsory question 6.

MACHAKOS COUNTY KCSE TRIAL & PRACTICE EXAMINATION 2015
Kenya Certificate of Secondary Education (K.C.S.E)
GEOGRAPHY
Paper 1
MARKING SCHEME

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1. a) **What is the solar system?**
   -   Solar system : It refers to the sun more than nine planets and other heavenly bodies like Asteroids comets meteors meteorites and satellite such as the moon.   1x1 = 1mk b) **State three planets that have satellites**
   ☐ Planets with satellites are: Uranus, Earth, Neptune, Mars, Jupiter and Saturn.   3x1 = 3mks
2. a) **Differentiate between meteors and meteorites.**
   -       Meteors are heavenly bodies that enter the earths atmosphere at high speed and burns up completely while meteorites fails to burn up and fall on the earths surface.   2x1 = 2 mks b)
Differentiate between latitudes and longitudes.
   ☐   Latitudes are parallel to each other longitudes are further to each other at the equator but meet at the poles.
   ☐   Latitudes are longer at the equator but shorter at the poles while longitudes have equal length around the earth.
   ☐   Longitudes are angular from the prime meridian while latitudes are angular measures from the equator.
                                                                                                            3x1 = 3 mks

3. a) **State three causes of earth movements.**
   ☐   Magma movement within the crust.
   ☐   Gravitative pressure on the crustal rocks.
   ☐   Convectional currents in the mantle.
   ☐   Isostatic adjustment.   3x1 = 3 mks
   b) **List two features resulting from horizontal earth movements.**
   ☐ Escarpments.
   ☐   Fault blocks.
   ☐   Basins / Depressions.
   ☐   Rift valleys.   2x1 = 2 mks
4. a) I**dentify the parts a, b, c**
         A- Lateral moraine   B- Medial moraine
         C- Terminal moraine   3x1 = 3 mks
   b) **State two factors that influence the rate of ice movement.**
   ☐   Gradient of the slope - ice moves faster on steep slope due to gravitational pull.

☐   Season – ice movement is faster in winter

☐   Friction – parts of sides and at the bottom of a glacier move slowly because they experience a high resistance to movement due to friction

☐   Thickness and weight – thick and heavy glacier move faster.   2x1 = 2 mks c)

State two conditions that lead to glacial deposition.

☐   Arise in temperature loads to melting of ice resulting to deposition of materials

☐   Friction between the moving ice and the valley floor leads to deposition of heavy materials beneath the ice

☐   sheets.

☐   Weight of moraine: ice cannot transport all and so it leaves some of it behind as it moves forward.

☐   Gradient / relief: flat areas accumulate a lot of ice and on melting it deposits material. 2x1 = 2 mks 5. a)

Plains found in Kenya

☐   Kano

☐   coastal plains in lower Tana and sabaki

☐   Yatta plateau

☐   Uasin Gishu ☐ Athi – Kapiti plains

b) Ways in which plains are formed

☐   Through folding if the Compressional forces are weak the landscape may be turned into gently sloping anticlines and wide synclines.

☐   Through volcanic eruptions when less viscous lava flows and solidifies on the earth‟s surface forming a plateau ☐ Due to deposition of river in their old stage forming a flood plain.

☐   Due to wave deposition on the coast

☐   Through scrap pedi – plantation

☐   Through glacial deposition of till plain and out wash

☐   Through erosion in areas where geomorphic cycle has been able to run its course without interruption.

      2x1 = 2 mks

SECTION B

Answer question 6 and any other two questions from this section

6.   Study the map of karatina sheet 121 / 3, scale 1: 50, 000 provided and answer the following questions.

a) i) **What was magnetic declination of the map as at January 1992?**

      01^009‟   1x1 = 1 mk

ii) Give the latitudinal and longitudinal extent of the area covered by the map.

☐   Between latitudes 0^015; and 0^031 south

☐   Between longitudes 57^00‟ East and 37015‟   2 x 1 = 2 mks b) i)

Apart from contours , name one other method used to show relief in the area covered by the map.

☐   Trigonometric stations

☐   Spot height   1x1 = 1 mk

ii)Calculate the area of Mt. Kenya forest reserve within kirinyaga District shown in the map.

Giveyour answer in square kilometers.

-       Area = 19 + (35☐ 2) = 36.5 km^2 ± i.e 35.5- 37.5 km^2 1x2 =2 mks

c) i) **Apart from houses , name two human made feature in grid square 8755.**

☐   All weather loose surface road / track / footpath.

☐   A bridge   2 x 1 = 2 mks

ii)Assume that four people live in each house in grid square 8755. Calculate population density.Calculate population density.

$$\frac{14 \times 4}{4}$$

$\frac{56}{1}$= 56 persons per kilometer 1   1 x 2 =2 mks

d) **Describe the flow of River Sagana.**

☐ From Mt. Kenya Forest River Sagana flows South Westwards to chieni Area.

☐ From Chieni the river flows southwards through the remaining parts of the mapped area,

☐ From chieni South wards through a meandering course.   3x1 = 3 mks

e) i) **Using evidence from the map identify two farming activities taking place in the area covered**

☐ Cattle farming / livestock keeping evidenced by the cattle dips, slaughter houses and Mutato salt lick.

☐ Coffee growing shown by presence of the coffee factories.

☐ Tea growing evidenced by tea estates.

☐ Fish farming shown by existence of fish research center in GS 8560 and fisheries department in Karatinatown.

3x1 = 3 mks

ii)Explain three factors which have influenced any of the farming activities qualified in (e) (i) above.

Cattle / livestock rearing

☐ Thicket, scrub, scattered trees indicate availability of pasture.

☐ Numerous rivers / streams and dams provide water from the animals.

☐ Provision of veterinary services evidenced by cattle dips / veterinary station in karatina town ensure thecattle are kept healthy.

☐ Cool temperature due to high altitude make the area condusive for rearing exotic / cross breed animals.

☐ High demand likely suggested by dense settlement provides market for the livestock.   1x3 = mks

Coffee / tea growing

☐ High rainfall evidenced by forest vegetation , high density of permanent rivers enables growing of tea /coffee

☐ Cool temperature due to high altitude provides ideal condition for growing coffee /tea.

☐ High density of settlement likely suggest availability of labour in the tea / coffee farms.

☐ Many coffee factories / tea centres provides market to the tea / coffee farmers.

☐ Good network of roads, enanles harvested tea leaves tea leaves/ coffee berries to reach the factory.

1 x3=3 mks

Fish farming

☐ Numerous rivers and streams provide water for fish ponds.

☐ Fisheries department in karatina Town provide extension services / technical advice.

☐ Cool temperature evidenced by forests / high attitude provide suitable conditions for rearing fish ☐ especially Tilapia and trout.

☐ High population likely suggested by high density of settlement provides market for fish.   1x3 =3 mks 7.

(a)i**State three causes of faulting?**

☐ Tension force

☐ Compressional force

☐ Shear / tear force   3x1 =3 mks

ii)**Differentiate between a normal and reverse fault**

A normal fault is an inclined fault caused by tension force whose plane and direction of down throw are both on the left or both on the right while a reverse fault is an inclined fault caused by compression where one block of load on ones side of the fault is pushed upwards in relation to the other.   2x1=2 mks (b)

With the aid of well labeled diagrams describe how a rift valley can be formed by Compressional forces. ☐ Layers of rocks of the crust are subjected to compressional forces.

Compression force   Compression force
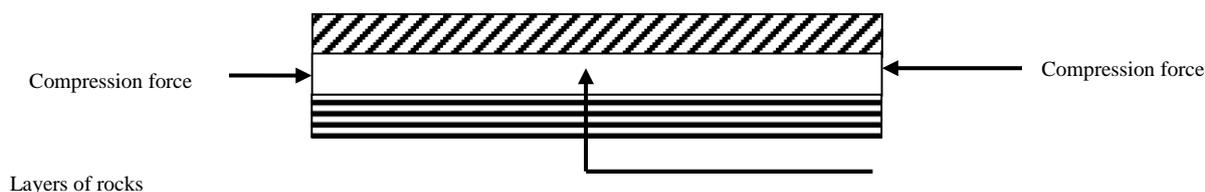
Layers of rocks

☐   Lines of weakness develop on the layers of rocks resulting in the development of two reverse faults. ☐ As compression forces push towards each other further, the side blocks slide / slide above the central /   Middle blocks, creating a rift valley.

Reverse fault
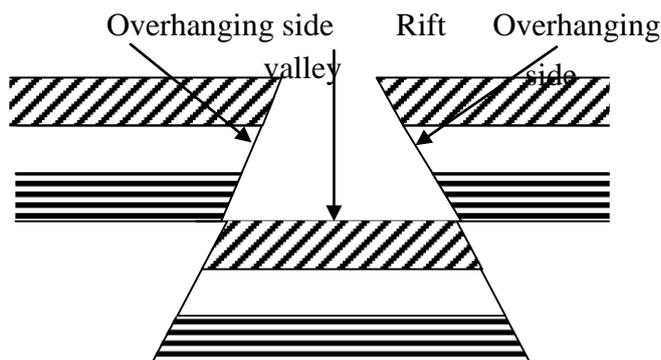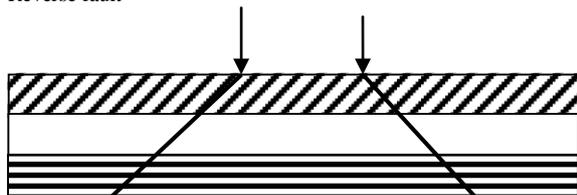
-      The overhanging sides are eventually worn out by denudation

Text = 4
Diagram 3 marks
Total   7 marks

(c) **Explain three effects of faulting**

☐   Block mountain formed from faulting block rain bearing winds causing relief rainfall on windward ☐ side thus favouring agriculture on the windward slopes.

☐   The block mountains are sources of rivers which provide water on lower slopes and lowlands for ☐ production of H.E.P for domestic , industrial use and irrigation.

☐   Features forming from faulting are attractive hence provide scenery which promote tourism. ☐ Depressions within the floor filled with water create Rift valley lakes important for fishing ☐ (e.g L. Naivasha ,Turkana ,Tanganyika etc) and irrigation.

☐   Some valuable minerals like diatomite can be exposed during faulting which can be extracted and sold to ☐ earn foreign exchange.

☐   Faulting across river courses can cause it to disappear or change its direction.

☐   Faulting can cause displacement of load that may disrupt or destroy transport and communication lines.

☐   Faulting causes disjointing of rocks that result in loss of life and destruction of property   3x2 =6 mks (d) i)

Objectives for the study

☐   To find out the factors that led to the formation of the Rift valley.

☐   To determine the forces responsible for the formation of rift valley.

☐   To find out the significance of the Rift valley in Kenya.   2x1=2 mks ii)

Three follow – up activities.

☐   Data analysis

☐   Group discussion

☐   Presentation of data

☐   Display photograph / maps

☐   Writing notes / report.   3x1=3 mks 8 (a)**A river catchment**

☐   It is the entire area from which a river draws its water   2x1=2 mks
        (b) **Conditions which lead to the rejuvenation of river.**

☐   Increased discharge - Because of increased rainfall increases the erosive activity of the river.

☐   A fall in the sea level - Leads to the river renewing its headward erosion starting from the new base level. ☐ River capture - Which increases the discharge of the master stream. The stream renews its erosive   activity.

☐   Uplift of land - Causes a stream to increase its erosive power.

☐   Changing rock resistance from hard to soften rocks.   (3 marks) (c) **How a river capture occurs.**

☐   River capture occurs where two rivers flow adjacent / close to each other.

☐   One of the rivers flows at a lower level than the other/ erodes its valley faster than the adjacent river.

☐   The pirate river may be eroding faster because it flows over softer rocks / has more water.

☐   The pirate river erodes its valley head wards towards the valley of the weaker one.

☐   Eventually the pirate / stronger river joins the valley of the weaker river.

☐   The headwaters of the weaker river start flowing into the pirate.

☐   The weaker river having lost its headwaters becomes smaller in size and is referred to as a misfit.
(**This point must be mentioned to score 8 marks otherwise maximum 6) (d) (i) **Four processes by which a river transports its load.**

☐   Some particles e.g. silt are carried in suspension because they are light and can be maintained within the turbulence of the water.

☐   Some of the load is dissolved in water and carried in solution.

☐   Some particles are fairly heavy and momentarily lifted by the turbulence of the water and then dropped
        onto the river bed – saltation process.

☐   The large and heavy particles are rolled along the river bed. A process known as traction. (8 marks)   (ii) List four characteristics of a flood plain.

☐   Gently sloping / flat surface.

☐   Thick alluvial deposits

☐   has levees

☐   has marshes/ swamps.

☐   has ox-bow lakes

☐   has braided channels / braids

☐   bluffs

☐   has river meanders   (4 marks)

9. (a) **Differentiate weather and weathering.**

☐   Weather is the atmospheric conditions of a place at a given time while weathering is the breakdown and decay of rocks at or near the earth‥s surface due to the influence of gravity.   (2 marks)   (b) **How can rocks be broken up by physical weatheringFrost action** ☐ water enters cracks. ☐   Temperature falls below 0^0 ☐ Water expands on freezing

☐   Pushes the rock with great force

☐   Repeating the process many times break the rock   2x1 = 2 mks

        Temperature changes –

☐   heating occurs and expansion of rock results

☐   Cooling occurs and contraction of rock,

☐   Other layer separates from the inner mass.   2x1 = 2 mks
        On loading

☐   rock is buried underneath at great pressure

☐   Erosion removes the over burden

☐   Rock expands on exposure

☐   Outer layer peels off.   2x1 = 2 mks

(c) **List five processes through which chemical weathering takes place**

☐ Solution

☐   Oxidation

☐   Hydration

☐   Carbonation

☐   Hydrolysis   5 x1 = 5 mk

(di) **What is mass wasting.**

     Down slope movement of weathered materials under the influence of gravity.   2 x1 = 2 mks

ii) **State four factors that influence mass wasting** ☐ Angle of slope / gradient ☐ Nature of underlying material.

☐   Extent of saturation

☐   Climate

☐   Vegetation

☐   Tectonic movements

☐   Human activities.   4 x1 = 4 mks   iii)

     Explain the positive effects of mass wasting to human.

☐   Tourist attraction – scenery created by mass wasting acts as tourist attractions.

☐   Creation of lakes – which provide fish and water for both industrial and human use.

☐   Influence on soil fertility – which promotes agriculture

☐   Denudation of the land surface i.e. processes that shape the earth‟s surface.   Any 3 x2 = 6 mks

     10 a) (i) **Apart from rain and ice, name two other sources of underground water.**

☐   Lake and sea water.

☐   Magmatic water.   2 x1 = 2 mks   ii)

     Explain how the following factors influence the existence of ground water. ☐   **Nature of the rocks**

☐   Soils and rocks with big panes, joints and cracks   allow more infiltration to occur / the more permeable the surface rocks are , the higher the rate of infiltration while impermeable rocks do not allow water to pass though them.   2x1=2 mks

     ☐   **Vegetation cover**

☐   Where there is plenty of vegetation cover the surface run off is obstructed. Its speed is slowed and most of the water has time to sink into the ground.   2x1=2 mks   iii)

     Distinguish between phraetic and vadose zone

☐   Phreatic zone is the underground rock layers where all the rock pores / air spaces are permanently filled with water while vadose zone is both the zone of intermitted and non- saturation.   2 x1 = 2 mks

          b)

(i) **Name the features marked X, Y and Z.**

     X- Stalactite

     Y- Cake

     Z- Stalagmite   3x1=3 mks

(ii) **Describe how limestone pillar was formed**

☐   Rain water absorbs carbon dioxide in the atmosphere to form carbonic acid.

☐   The rain water falls on jointed limestone rocks.

☐   The percolating water reacts with calcium carbonate to form calcium bicarbonate solution.

☐   The solution drips from the roof of the cave.

☐   The solution droplets hand on the roof of the cave.

☐   Water evaporates and calcium carbonate in it is precipitated

- The precipitated calcium carbonate gradually builds upwards over a period of time as the solution ☐ continues to drip from the roof to form a stalactite.
- The solution splashes on the floor and water evaporates and calcium carbonate in it is precipitated.
- The precipitated calcium carbonate gradually builds upwards to form a stalagmite.
- Over time stalactite and the stalagmite join to form a pillar column.   5 x1 = 5 mks c) **You are supposed to carry out a field study of an area eroded by underground water**

(i)   Name two surface features you are likely to identify during the field study ☐ Exposed rocks / inselbergs
- Ridges / clints
- Gollies / wadies / grikes / dry river beds / gorges / canyons
- Earth pillar   2x1=2 marks

   (ii) **State four reasons why you would prepare a work schedule**
- To ensure proper time management
- In order to remain within the scope of the study topic.
- To ensures that all areas are adequately covered.
- A pointer to show how much time will be required for the for the study.
- Provides a basis for evaluating the field while it is still in progress.   4x1=4 marks

   (iii) **Give three follow –up activities you would engage in:**
- Reading more on the topic
- Displaying photograph / items collected / sample.
- Asking/ answering questions.
- Writing reports.
- Discussing with the rest of the class
- analyzing / assessing the information collected against the hypothesis
- Drawing diagrams.   Any 3 x1= 3 mks **MACHAKOS COUNTY KCSE TRIAL AND PRACTICE EXAM 2015**
   Kenya Certificate of Secondary Education (K.C.SE)
   312/2
   GEOGRAPHY
   PAPER 2
   Marking scheme

   SECTION A: (25 Marks)

1. Use the map of Lake Victoria below to answer question (a)
(see the question paper for the sketch map (a) **Name the ports marked E, F and G.**

E- Mwanza
F- Bukoba
G- Entebe   3x 1 = 3 marks

(b) **State two reasons why the use of waterways from kisumu to other lake ports has tremendously declined.**
- <u>Decreased trade</u> in fish limiting the use of water transport.
- <u>Not flexible</u> as it only serves the lake ports.
- <u>Serves a small area</u>/ Lake Victoria region only.
- There is <u>small volume of passengers</u> to maintain daily fleets.
- The means of transports is <u>very slow</u>.
- <u>Emergence of bus transport companies / regional airlines</u> with direct routes to most of the lake ports from other regions.   Any 2 x 1 = 2 marks

2. **Give four reasons why the use of solar energy is becoming popular and widespread in Kenya.**

☐ It is <u>free and almost accessible</u> by everyone ☐ It is <u>safe</u> to use.
- It is <u>inexhaustible source of energy</u> / <u>renewable</u>.
- It can be <u>stored</u> in some devices for future uses.

☐   It is <u>found nearly everywhere</u> in Kenya / ubetiqous.

☐   It is a <u>cheap</u> source of energy.

☐   It has <u>many domestic uses.</u>

☐   It is <u>clean</u> / <u>environmentally friends</u>/ does not pollute the environment.   Any 4 x1 = 4 marks 3. (a)

Name two types of underground mining apart from deep shaft mining. ☐ Drift / Adit mining

☐   Solution mining

☐   Drilling   Any 2 x 1 = 2

marks

(b) **State two problems associated with deep shaft mining.**

☐   Sometimes the mines are flooded with subterranean / underground water <u>causing water borne diseases</u>.

☐   The dust produced during mining <u>cause respiratory diseases.</u>

☐   Occasional emissions of poisonous gases may cause <u>death</u> / <u>respiratory problems.</u>

☐   Sometimes tunnels collapse causing <u>deaths of miners.</u>   Any 2 x 1 = 2 marks

4. (a) **State three reasons why the government encourages Afforestation programmes in the country.**

☐   To <u>regulate climate.</u>

☐   To ensure <u>sustainable supply of timber</u> products.

☐   To <u>check extinction</u> of indigenous trees.

☐   To put <u>more land under forest</u> cover.

☐   To <u>protect water catchment</u> areas.

☐   To <u>protect soil</u> from erosion by wind / water.   Any 3 x 1 = 3 marks

(b) **Give three reasons why the areas under forest in Kenya continue to decline.**

☐   <u>Overexploitation</u> of certain / indigenous tree species. ☐ Clearing of forests to provide <u>agricultural</u> land /

settlement ☐ <u>High population</u> growth rate pressurizing the forests.

☐   <u>Selective implementation of government policies</u> to protect forests.

☐   <u>Prolonged drought /global warming</u> in some areas.

☐   Presence of <u>forest dwelling communities</u> in some forests.

☐   <u>Mining activities</u> near some forests / Kakamega forests.

☐   Frequent <u>fire outbreaks.</u>   Any 3 x 1 = 3

marks

5. (a) **Identify the three main functional zones of an ideal urban centre.**

☐   Central Business District (CBD).

☐   Industrial Zone.

☐   Residential Zone.   3 x 1 = 3 marks

(b) Outline **four** functional differences between Kisumu and Nairobi City.

Nairobi city	Kisumu
- Both national and county headquarters	- County headquarters
- Has heavy manufacturing industries	- Has light industries
- Has road, air and railway transport	- Has water transport in addition.
- Is headquarters to international agencies like UNEP	- Not headquarter to any international agency.
- Houses all foreign embassies in kenya	- Does not.
- Financial centers with stock exchange Market	- Kisumu does not have stock exchange market

Any 2 x 2 = 4 marks

SECTION B: (75 Marks)

Answer question 6 and any other two questions in this section.

6. The table shows the value in terms of billions US Dollars of Kenya's imports and exports between the years 2003 and 2008. Use it to answer question (a) (i) and (ii). (See the question paper for the table) (a) (i) Calculate the balance of payment in the year 2008.   4.10 – 8.54 = $-- 4.44 billions

NB the figure must be negative to score otherwise zero.

(ii) COMPARATIVE BAR GRAPH SHOWING VOLUME OF KENYA'S EXPORTS AND IMPORTS
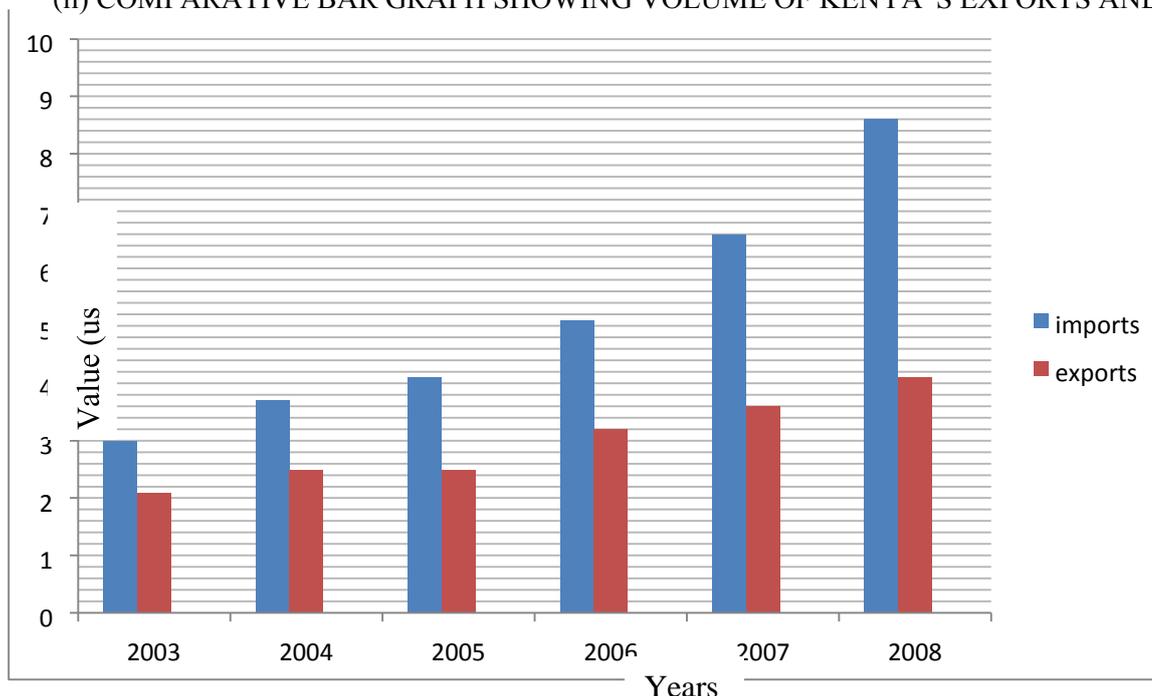
All bars drawn correctly ₋ max 4 mks

(iii) **State four reasons why Kenya's exports are generally low.**
- There are <u>fixed quotas</u> for some Kenya's export at international market.
- <u>Prices of some Kenya's goods are determined in the world market / externally determined</u> ☐ <u>International prices keep on changing from year to year affecting the exports.</u> ☐ Some products Kenya exports are <u>inferior in quality</u>
- Most of Kenya exports are in <u>raw form fetching low prices.</u>
- <u>Competition</u> from other producing countries which export better similar goods.   Any 4 x 1 = 4 marks (b) (i) **List three major imports to Kenya from Japan.**
- Watches / precision instruments
- Textile
- Automobiles / vehicle parts
- Machinery / electronic appliance / electrical / TVs / Radios
- Musical instruments.   Any 3 x 1 = 3 marks

(ii) **Explain four measures the Kenya government is taking to reduce the unfavorable balance of trade.**
- The government is <u>encouraging the development of Jua kali industry / SMEs which does not require the importation of expensive heavy machinery so that it can also export the products to the regional COMESA market.</u>
- The <u>government is diversifying the agricultural export base to enable the country have a variety of exports.</u>
- The government is <u>opening new markets</u> in Far East Asia / COMESA <u>to increase the market base / avoid over dependence on traditional partners</u> who dictate market conditions.
- The government is encouraging <u>the production of high quality manufactured goods</u> for exports <u>in order to earn higher income.</u>
- Through commercial attaches in various countries, the government <u>is popularizing trade to increase earnings from both the invisible and visible trade.</u>
- The government is <u>restricting the importation of luxury items through heavy taxation.</u>
- The government is <u>establishing import substitution industries to reduce the importation of some goods / commodities.</u>

- The government is heavily <u>investing in oil exploration / geothermal power production / use of solar energy / research on nuclear energy to reduce the constant importation of petroleum.</u>
- The government is <u>popularizing tourism</u> in new European and Asian countries to <u>increase earnings from invisible trade.</u>   Any 4 x 2 = 8 marks

7. (a) **(i) Name <u>two</u> species of coffee grown in Kenya.**

- Robusta
- Arabica   2 x 1 = 2 marks

   (ii) **Explain how the following factors favour coffee growing in the central Highlands of   Kenya.**
         High Altitude

- High altitude is associated with <u>high / well distributed rainfall ideal for coffee.</u>
- The cool temperature in high altitude areas is i<u>deal for coffee farming / less pests infestation in cool areas.</u>
         High population.
- Provides <u>labour for planting / pruning / harvesting / processing.</u>

   (b) **(i) Explain three ways in which the government promotes coffee growing in Kenya.**

- <u>Conducting research</u> on new species of coffee / methods of controlling pests / <u>diseases to improve the coffee yields.</u>
- Through coffee Board of Kenya, <u>the government is marketing coffee on behalf of farmers to improve their earnings.</u>
- The government <u>advances loans</u> to farmers through Kenya Planters and Cooperative Unions /financial institutions <u>to assist farmers to improve their farming.</u>
- The government provides <u>extension workers</u> through the Ministry of Agriculture to <u>advice the farmers on better methods of coffee farming</u>
- The government <u>constructs new roads / improves</u> the existing ones in the growing areas <u>to enhance the transportation of coffee.</u>   Any 3 x 2 = 6 marks

(ii) Compare coffee growing in Kenya and Brazil under the following;
         Marketing;

- Brazil has better efficient marketing system than Kenya.
- In Brazil, coffee is marketed by the Institute for Permanent Defense while in Kenya it is done by Coffee Board of Kenya.   Any 2 x 1 = 2 marks

Climatic hazards;

- The main climatic hazard facing coffee farming in Brazil is <u>frost</u> while Kenya suffers from <u>heavy rainfall and prolonged drought.</u>   Any 2 x 1 = 2 marks

      (c) **Suppose you carried out a field study on a coffee plantation;**
     (i) **State three problems facing coffee farmers you are likely to observe during the field study.**

- <u>Poor feeder roads / poorly maintained</u> roads within the coffee farms.
- <u>Shortage of labour</u> in case it is during harvesting.
- <u>Presence of pests</u> such as leaf moths / thrips on coffee bushes.
- <u>Premature drop of coffee berries</u> / <u>molds on berries</u> indicating presence of coffee berry disease.
- <u>Wilting / drying</u> coffee bushes as result of drought.
- <u>Some scanty coffee bushes</u> an indication of soil exhaustion.
- <u>Respiratory problems</u> due to heavy spraying of coffee bushes.

 NB: The problem must be observable during the field study to score.   Any 3 x 1 = 3 marks

(ii) **Give two methods you would use to collect data other than observation.**

-       Field sketching
- Note taking
- Collecting sample
- Photograph taking / video recording.   Any 2 x 1 = 2 marks

      (iii) **In what two ways will you advice farmers to avert the problems identified in (c) (i)**

above? ☐   Use of <u>pesticides to control pests such as thrips</u> / spider mites / leaf moths ☐ Apply
<u>organic manure to regenerate the exhausted</u> coffee farms.

☐ Engage coffee Board / government of Kenya In maintenance of the roads.

☐ Access credit facilities from Coffee Board of Kenya / other financial institution to maintain coffee farms. ☐ Wear masks while spraying coffee to reduce incidences of respiratory diseases.

NB: Remedy must be tied to a problem to score. Any 2 x 2 = 4 marks

8. (a) **Describe the characteristics of the population represented by the pyramid.**

☐ The population has a low birth rate.

☐ The population has low death rate.

☐ The number of male and female population is almost equal at all level.

☐ The ageing population is low.

☐ The dependency ratio is low.

☐ The population has high life expectancy.

☐ From 0-14 years, the population is low.

☐ From 14-44 years, the population is high. Any 5 x 1 = 5 marks

(b) (i) **Name two documents from where the information above may have been obtained other than census reports.**

☐ Internet ☐ Magazines.

☐ Text books.

☐ Periodicals / journals.

☐ Statistical abstracts. Any 2 x 1 = 2 marks

(ii) **State three reasons why it is important for a country to carry out a population census.**

☐ To plan for every part of the country according to population density and distribution.

☐ It enables the government to make estimates of population growth.

☐ To help the government in creating administrative units.

☐ To identify the rates of deaths and births.

☐ It helps the government in distribution of resources. Any 4 x 1 = 4 marks (c) **Explain four consequence of slow population growth rate to a country.**

☐ Little taxes / revenue is collected hence low investment by the government to spar economic growth.

☐ Underutilization of resources such as schools /

☐ hospitals hence it becomes expensive for the government to run them.

☐ Limited investment in a country as small number of people discourage investors from setting up industries in a country / market for finished products.

☐ Reduced market for both agricultural /

☐ industrial goods necessitating a country to export her goods which may face stiff competition earning little revenue.

☐ Small labor force which may force a country to import labor that sometimes maybe expensive.

☐ Expensive supply of resources such as electricity / water / roads / schools / hospitals to sparsely populated areas.

☐ Defenselessness as slow population growth rate makes a country vulnerable to attacks/ provocations by other countries.

Any 4x 2 = 8 marks

(d) **Explain three economic factors that influence population distribution in East Africa.**

☐ Construction of major highways / railways / transport networks attract people who settle along them with an aim of doing business / population tend to be sparse in areas with poor / no communication networks like roads / people can also be displace to pave way for the transport networks lowering population.

☐ Urbanization as people tend to migrate to urban centers in search of employment opportunities / social amenities increasing population / low population in rural areas.

☐ Mining centres /activities /oil exploration attract people looking for jobs / establish trade in areas where mining is taking place leading to high population / forced compensation can displace people from such mining centers leading to low population.

☐ Establishment of new industries attracts people to where they are located in search jobs of / social amenities.

☐ Development of tourism in an area / construction of big hotels for tourists tend to attract people in such areas especially along the coastal towns of East Africa.

☐ Massive Afforestation programmes may displace people in some areas / areas with forests are sparsely populated.

Any 3 x 2 = 6 marks

9. (a) **i) What is domestic tourism?**

- It is the <u>visit by citizens of a country</u> to places of interest within the same country / it is the tourism of resident visitors within the economic territory of country of reference.   Any 2 x 1 = 2 marks   ii)

State four reasons why the government is encouraging domestic tourism.

☐   To <u>create employment opportunities</u> in the country.

☐   To <u>make use of tourists activities</u> during the low tourist season.

☐   To enable people from different <u>communities to interact / to enhance national unity</u>.

☐   To <u>expose Kenyans to the wide variety of recreational facilities</u> in the country.

☐   To <u>enhance circulation of money</u> within the country / <u>to promote the domestic trade</u>.

☐   To make <u>Kenyans appreciate the country"s national heritage / artifacts / culture / wildlife.</u>

☐   To ensure that <u>Kenyans become familiar with the different parts of the country</u>.   Any 4 x 1 = 4 marks

(c) **(i)   Apart from establishing national parks and game reserves, outline four other ways in which wildlife is being conserved in Kenya.**

☐   <u>Enacting laws / regulations</u> to curb poaching / game trade.

☐   <u>Encouraging individuals to set up game ranches</u> for controlled hunting / sanctuaries to protect endangered /orphaned animals

☐   Provision of <u>veterinary services</u> through wildlife agencies / Kenya wildlife Service.

☐   <u>Promotion of eco-tourism</u> to reduce tourism related environmental damage that may lead to extinction of wildlife spp.

☐   <u>Educating the general public</u> on the need to conserve wildlife / support conservation practices / joint ownership of parks with local communities / authorities.

☐   <u>Constructing electric fences</u> in some parks to minimize human – wildlife conflicts.

☐   <u>Establishing the ministry of wildlife to oversee conservation practices /</u> creating anti poaching units to tract down and arrest poachers.

☐   <u>Signing conventions</u> with international agencies / cites to protect the endangered species. Any 4 x 1 = 4 marks   **(ii) State three reasons why national parks and game reserves have been established in Kenya.**

☐   For <u>future generation to benefit</u> from the same.

☐   To <u>preserve the national beauty of the</u> country.

☐   To <u>provide an environment for education /</u> research.

☐   To <u>conserve wildlife</u> / plants and animals.

☐   To <u>promote tourism</u> / provide recreation.   Any 3 x 1 = 3 marks

(d) **Explain three ways in which the Masai Mara game reserve benefits the local Maasai community.**

☐   The game reserve offers <u>employment opportunities</u> of the Maasai <u>improving their living standards.</u>

☐   The hotel in the game reserve provides <u>great market for local products like meat / milk</u> improving income to the local communities.

☐   The Maasai community is allowed to <u>graze their livestock within the reserve</u> to <u>minimize conflicts</u> with the <u>management.</u>

☐   <u>Educational institutions</u> have been established near the reserve which <u>accommodate many</u> locals / offer training in hospitality.

☐   <u>Social amenities</u> have been provided to <u>uplift the living standards</u> of the locals.

☐   Sometimes the Maasai are <u>given meat when animals are culled</u> to improve their relationship with the management.

☐   Roads <u>have been constructed</u> which <u>improve trade</u> in the area.   Any 3 x 2 = 6 marks   (e) **Explain three ways in which the future of tourism can be improved in Kenya.**

☐   <u>Improving security</u> in tourist attraction sites to <u>protect tourists</u> thus eliminating chances of tourists abduction. /terrorists attack.

☐   <u>Marketing of Kenyan tourism</u>/ attracts both locally / internationally through Kenya Tourism Board to increase the number of both domestic / international tourists.

☐   <u>Lowering the hotel charges</u> / game parks charges / air port taxes to <u>encourage tourists</u> to visit Kenya.

☐   <u>Lower the strength of the</u> shilling to encourage international tourists.

☐   <u>Tarmac / maintain roads in tourist attraction sites</u> to <u>improve mobility of</u> tourists. Any 3 x 2 = 6 marks 10. (a) (i) **What is industrialization?**

- It is the <u>process / pace at which a country / community sets / establishes industries</u>. It is the process of <u>change from primary to secondary to tertiary production</u>. It is the level of industrial production.   Any 2 x 1 = 2 marks

(ii) State three reasons why some industries consider regular supply of water as the main reason for their location .

- Water is used for constant cooling of the machines to avoid damage by heat.
- In some industries, water is used for cleaning the raw materials/ to improve the quality of the final products/coffee industry.
- Some industries use water as a cheap means of transport.
- Some industries require water as a medium through which they dispose off their waste products.
- In coffee factories, water is used for grading coffee berries.
- Some industries use water to provide power to turn their machines.
- Some industries use water as the main raw materials / brewing industry / soft drink industry. Any 3 x 1 = 3 marks (b)

Outline four similarities between Jua kali industry in Kenya and cottage industry in India.

- Both are operated by small individuals / groups
- Sometimes they are both practiced as part time
- Both of their products are sold in the local market / some can be exported ☐   They both use simple equipment.
- They both use basic / simple skills in craft.
- They both use local / recycled raw materials.
- They both require little capital investment to begin.
- They are both widespread in the country / in urban centers.
- They are mostly operated in open sheds / homes. / Simple enclosure.
- They are both labour intensive.
- In most cases, they are both owned by families.   Any 4 x 1 = 4 marks

(c) Explain three factors that have influenced the location of iron and steel industry in the Ruhr region of Germany in the 19th century.

- Presence of other industries in the region such as food and textile provided industrial inertia.
- Availability of coal / iron ore / limestone from within the region / Rhine Valley provided raw materials needed in the industry.
- The Dense and affluent population in western Europe / Germany provided ready market for iron and steel.
- Rich merchants and companies such as Kotile AC/ Krupp group provided capital for the establishment / development / of industries.
- Presence of negotiable rivers such as Rhine/ Ruhr / Lipper /Wupper / Escher provided cheap means of transport for the bulky raw materials / finished products.
- Coal from the Ruhr region / imported petroleum provided power required in the industry.
- River Rhine / Ruhr / Lipper / Wupper / Escher provided water required for cooling machines in the industry / raw materials in the industry.
- The local population had acquired skills in the iron working / availability of local skilled labour which formed the foundation of iron and steel industry.   Any 3 x2 = 6 marks

(d) (i) State three effects of the industry on the environment you are likely to observe.

- Smoke from chimneys polluting air / air pollution.
- Garbage heaps as a result of solid industrial waste polluting soil.
- Industrial discharge polluting water bodies / soil / biodiversity.
- A lot of noise causing noise pollution.   Any 3 x 1 = 3 marks

(ii) Design a working programme (schedule) you would use during the day of study.

Time	Activity
-	☐ Assemble equipment
-	☐ Depart for the area of study
-	☐ Arrive at the area of study
-	☐ Report to the authorities
-	☐ *Embark on data collection
-	☐ Report back to the authorities
-	☐ Report back to school

NB: *Must be mentioned to score maximum 4 points   4 x 1 = 4 marks
    (iii)**State three reasons why it is important to prepare a working programme (schedule) for the study.**

- It gives <u>ample / enough time</u> to each activity so that no activity is forgotten.
- It <u>provides the framework that guides</u> the research team to work within the scope of the topic.
- It <u>reduces the tendency to waste time forcing the research</u> team to work within the allocated time.
- It <u>provides the basis for evaluating the research</u> while still in progress.
- It provides an <u>estimate of the time</u> required for the study.   Any 3 x 1 = 3 marks

SUNSHINE
312/1
GEOGRAPHY
PAPER 1

SECTION A
Answer all the questions in this section

1. a) State two forces that shape the surface of the earth. (2mks) b) State three characteristics of the crust. (3mks)
2. Describe how exfoliation dome is formed. (5mks)
3. a) Distinguish between a coast and a shore. (2mks) b) State three conditions necessary for the formation of a spit. (3mks)
4. a) State three ideal conditions for the formation of an artesian well (3mks) b) Give two ways in which underground water may reach the earth surface. (2mks)
5. The diagram below shows vegetation zones on a mountain slope. Use it to answer question (a)
    a) Identify the vegetation zones marked P and Q (2mks)
    b) State three characteristics of savanna vegetation. (3mks)

SECTION B
Answer question 6 and any other two questions from this section.

6. Study the map of Belgut sheet 117/3 and the following questions.
a) i) Give the six figure grid reference for Teldet school in the North. (2mks)
ii) What is the approximate area of Homa Bay district found on the map extract. (2mks) b) i) Give the direction and bearing of Mindililwet school from Chebirbei junction. (2mks) ii) Measure the distance of river Sondo from Northing 50 to the end in the West. (2mks) c. Draw a rectangle representing the area West of Easting 30 and North of Northing 50. (2mks) On it mark and name the following:
    i) River Sondo (1mk) ii) Sikowon hill (1mk) iii) Iii)All weather road bound surface. (1mk)
    iv) Papyrus swamp (1mk)
d) i) Citing evidence from the area covered by the map, name any 2 social activities taking place in Kebenet. (2mks)
        ii) Give two uses of river Sondo in the area through which it flows. (2mks)
    iii) Explain 3 factors that have influenced the growing of Tea in area covered by the map (use evidence) (6mks)
    iv) Name two types of settlement found at grid 2457. (1mk)
7. Study the map of Kenya showing faulting and answer the questions below.
a. i) Name the features marked 1, 2 (2mks)
    ii) Name the scarps 3, 4 and 5 (2mks
    iii) Name the lakes marked 7, 8 (2mks) b)
i) State three characteristics of the Rift Valley. (3mks) ii) Using relevant diagrams, describe how a horst (fault block) was formed by Tensional forces. (5mks)
c. You carried out a field study in the region above on the effects of faulting on human activities.
    i) State one hypothesis of your study. (1mk) ii) State three problems you experienced during the study. (3mks) iii) State three finding on the positive effects of faulting on human activities. (3mks) iv)State three follow up activities you engaged in. (3mks)
8. a) i) Distinguish between soil profile and soil catena. (2mks) ii) State two importance of minerals (inorganic matter) in the soil. (2mks)
    b. i) Explain how the following factors influence soil formation:
a) Climate (3mks)
b) Living organism (3mks)
c) Describe calcification as a leaching process in soil formation. (3mks)
d) i) What is soil degeneration? (1mk)
    ii) Identify two types of soil degeneration. (2mks) e) Explain three ways in which vegetation protects the soil from degeneration. (6mks) **312/2**
    GEOGRAPHY

SUNSHINE
PAPER 2
SECTION A

1. a) Name two tree species of high commercial value in a coniferous forest. (2mks) b) State three characteristics of Tropical hardwood forests which hinder exploitation. (3mks)
2. State two factors that influence exploitation of minerals. (2mks) b) Describe how soda ash is extracted in Lake Magadi. (3mks)
3. a) i) Distinguish between population distribution and population density. (1mk) ii)What is dependency ratio? (1mk)
   b) State three reasons for reduced fertility rate in Kenya. (3mks)
4. a) i)Name two dairy cattle breeds reared in Kenya. (2mks) b) State three differences between beef farming in Argentina and Kenya. (3mks)
5. a) Give two advantages of wood as a source of fuel. (2mks) b) State three conditions necessary for the formation of Oil. (3mks) **SECTION B**
6. Study the table below that shows Kenya's visible balance of Trade with some selected countries. 1982-1984 (figures in pounds ,000).

County	1982		1983		1984	
	Exports	**Imports**	**Exports**	**Imports**	**Exports**	**Imports**
UK	72,000	135,000	96,000	120,000	140,000	152,000
Germany	60,500	75,5000	82,000	70,000	98,000	98,000
USSR	4,500	150	3,000	100	4,000	300
U.S.A	35,000	54,000	40,000	56,000	38,000	50,000
Uganda	58,000	1,300	7,2000	800	67,000	100,000

   a) i) Draw a comparative line graph showing the exports from 1982 to 1984 using a vertical scale of 1:10 million
   and horizontal scale. (8mks)

   ii) State three disadvantages of this graph experienced during the construction. (3mks)
   b) i) Define balance of trade. (2mks)
   ii) Calculate the balance of trade for Kenya 1984. (2mks)
   c. i) Name two major exports and two major imports of Kenya. (4mks)
   ii) Give three reasons for the nature of Kenya's balance of trade from the table above. (3mks)
   d) State three measures the government has taken to achieve a favourable balance of trade.
7. a) i) Name two provinces in Canada where wheat is grown. (2mks)
   ii) Explain four physical factors favouring wheat growing in Kenya. (8mks)
   b) Compare wheat farming in Kenya and Canada under the following headings:
   ☐ cultivation (2mks)
   ☐ harvesting (2mks)
   ☐ marketing (2mks)

   c. i) Explain three human and economic problems facing wheat farming in Canada. (6mks)
   ii) State three importance of wheat farming in Canada. (3mks)
8. a .i) Name two countries found in the north West pacific fishing ground. (2mks)
   ii) Explain four physical factors that favour fishing in the above fishing ground. (8mks)
   b) Describe the following methods of fishing:
   i) drifting (4mks)
   ii) purse seine (4mks)
   c) Compare fishing in Kenya and Japan under the following sub-headings:
   i) fishing ground (2mks)
   ii) climate (2mks)

SUNSHINE

d) State 3 significance of fishing to the economy of Kenya. (3mks)

GEOGRAPHY PRE-MOCK
MARKING SCHEME
PAPER 1
SECTION A

1. a) Forces that shape the surface of the earth centripetal – pulls the poles towards each other and causes flattening

☐ Centrifugal flinging force that causes the bulge at the equator

☐ Gravitational – pulls towards the centre causing the rounding effect **2 x 1 = 2 marks** b)
   Characteristics of the crust

☐ Average thickness 16 – 24km (Mts upto 70/80 km)

☐ Made up of two parts. the outer and inner crust

☐ The outer crust made of Silica and aluminium (SIAL)

☐ The inner crust made of SIMA

☐ SIAL density - 2.7 gms / cc

☐ SIMA average density 2.3 - 3.0 gm/cc

☐ Sial mainly forms the continental crust while Sima forms the oceanic crust. **Max. 3 x 1 = 3 marks 2.**
   Exfoliation dome

☐ forms in areas with high temps and in homogeneous rocks

☐ during the day the rocks surface heat up

☐ this causes the surface layers to expand

☐ at night low temps result in cooling and contraction of the out layers

☐ the alternative expansion and contraction results in peeling off from the rock

☐ this leaves behind a round-off mass known as Exfoliation dome **(5 marks)**

3. a) A coast us shore

- A coast is a strip of land that is bordering the sea while a shore is the point along the coast that lies between the lowest water tide and the highest point reached by waves. **(2mks)**

   b) Conditions necessary for the formation of a spit

- relatively shallow and sheltered water

- Availability of a lot of load

- A long one ward shore drift must occur -   A gently sloping shoreline

- A change in the angle of the coastline for deposition to occur **Max 3 x 1 = 3 marks 4.**

a) Ideal conditions for an artesian well

☐ the aquifer must outcrop in a region which is a source of water

☐ the aquifer must did from a region of water intake to form a broad syncline

☐ the aquifer must lie between impermeable rocks so as to retain water

☐ the mouth of the well must be lower than the intake area to ensure water comes out on its own.

(max 3 x 1 = 3 marks) b)
Water may reach the surface through

☐ through spring / wells / seepage

☐ through capillary action / trangiration **(2 marks)**

5. a) P. Heath and Moorland Q Bamboo forest

   b) **Characteristics of Savanna vegetation**

☐ Consists of a grass and scattered trees

SUNSHINE

- ☐ Wetter areas grass is tall and close together
- ☐ Drier areas, the grass is shorter and
- ☐ Grass dominates the vegetation
- ☐ The trees are shorter and more scattered
- ☐ The trees are umbrella shaped
- ☐ Some trees like baobao have thick back

SECTION B

Answer question 6 and any other 2 questions from this section

6. **a. i)Six figure grid ref. for Teldet school.** (2mks)

406595

ii) Approx. area of Homa Bay District **(2mks)**

Full sq = 1

Half sq = 10/2 = 5

A = 5x1 = 6 km^2 + 0.5 (5.5 – 6.5)

b i) Direction and bearing of Mindililwet school from Chebribi junction **(2mks)**

NE 049º

iii) Measure the distance of river Sondo from Northing 50 to the End in the West.

11.8 km □ 0.1 (11.7 – 11.9 km)

c) Draw a rectangle representing the area West of Easting 30 and North of Northing 50. **(2mks)**
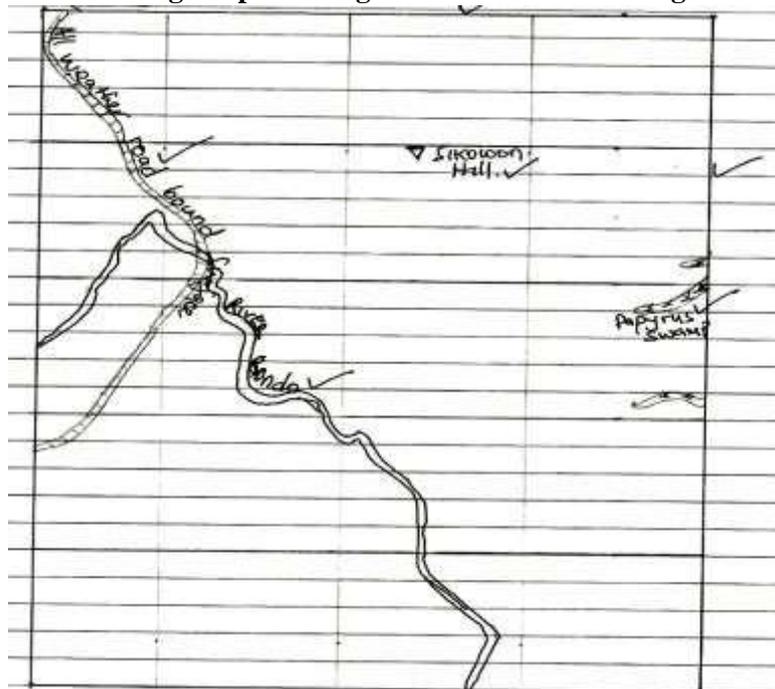
d i) Citing evidence from the area covered name any 2 social activities taking place in Kebenet

□ Health as evidenced by a dispensary

□ Education as evidenced by a school

□ Transport as evidenced by the all weather road loose surface **any 2 x 1 = 2 marks ii) Give two uses of river Sondo in the area.** **(2mks)**

□ For domestic use

□ It forms a boundary provincial and district **2 x 1 = 2 mks iii) Explain 3 factors that have influenced the growing tea in the area covered by the map with evidence.**

(6mks)

□ Rainfall as evidenced by permanent rivers for growth of Tea

□ Transportation as evidenced by the all-weather road loose surface for transportation of tea

□ Labour as evidenced by many settlements for picking tea

□ Well drained soils as evidenced by spaced contours which favours tea growing

□ High altitude as evidenced by high contour heights of about 1800m for growth of tea **Any 3 x 2 = 6 mks**

iv) Name two types of settlement found at grid 2457 **(1mk)**

□ Village settlement

□ Huts

□ Permanent settlement **Any 2 x ½ = 1 mk**

7. a i) 1 - Gregory /Kenyan rift   **1 mk**
 2 - Kavirondo   **1 mk** ii) 3 - Elgeyo   **1mk** 4 - Nguruman   **1mk** 4 - Nyandarua
1mk iii) 7 - Magadi   **1mk**

8 - Turkana   **1mk** b) i) - varies in height 600m
- has Lake basins
- has volcanic hills/ridges
- varies in width 100km – 50km   **3 mks** ii) Hors
- Crustal rocks are subjected to tensional forces
- Parallel faults develop
- The side blocks are downwarped as the middle block upward
- The flat topped hill bordered by sleep scarps is a horst

C i) The rift valley has attracted dense settlements   **1 mk** ii) **Problems experienced during the study**
- steep slopes are difficult to climb
- Inaccessibility in some areas
- Attack from wild animals
- Fatigue from the high temperature   **3 x 1 = mks iii) findings**
- Exposes minerals easing mining
- Rainfall the windward slopes - support agriculture and forestry
- Faults pave way for hot spring – tap for Geothermal power
- Fault scarps – provide sites for water fall – tourists attraction & generation of HEP
    3 X 1 = mks

8. a) i) Distinguish between soil profile and soil catena
    Soil profile refers to the <u>vertical arrangementof soil layers</u> from the surface to the bedrock while soil catena is sequence of different soil types down a slope from the top to the bottom of the hill.   **(2mks)**
    Mark as a whole
    ii) State two importance of minerals in the soils
- Form the soil framework
- Give anchorage to plants
- Determine the porosity of the soil
- Add minerals to the soil   **(any 2x1 – 2 mks)**
    b)   i) Explain how the following factors influence soil formation
    a) **Climate**
- rainfall provides moisture required for chemical weathering leading to soil formation
- rainfall affects the rate at which soil forming process occur
- seasonal variation of rainfall can cause concentration of salts in the soil
- high temperatures increase the rate of weathering thus accelerate soil formation
- also speed up bacterial activities hence help in decay of organic matter adding humus in the soil
- wind water and ice erosion carry away the top soil leading to formation of this soils
- eroded materials are carried and deposited elsewhere leading to formation of loes and alluvial soils **b) Living organism**
- Assist in breaking down of rocks through burrowing ploughing and root penetration
- Influence the chemical composition of soils by adding or removing organic acids and minerals □ Burrowing of animals improves soil aeration
- Decay of plant and animal remains add hums and mineral hence influencing soil fertility
                                (any 3x1 = 3 mks)
    c)   **Describe as a teaching process in soil formation**
- Process involving formation of soil rich in carbonate horizon B and C
- Process occur in areas where evaporation exceed precipitation and the parent rock in rich in calcium carbonate
- As evaporation take place, the concentration of salts and bases in the soil solutions increases

☐ The dissolved substances rise through capillary actions then precipitates in horizon B and calcium bicarbonate change into carbonates forming a crust of calcium compounds within the same profile

    d)   **i) What is soil degeneration?**
This is the decline in the usefulness of soil due to soil mismanagement or environmental causes or both
OR
This refers to the loss of soil fertility   (1mk) **ii)**
    Identify two types of soil degeneration

☐ physical degeneration
☐ chemical degeneration
☐ biological degeneration   **any 2x1 = 2mks)**
    e)   **Explain three ways in which vegetation protects the soil from degeneration**
☐ Leaf cover reduce the force of raindrops which would loosen and dislodge the soil particle reducing splash erosion.
☐ Vegetation cover increases the infiltration of rainwater into the soil thus keeping the soil moist.
☐ Plant roots penetrating into the soil help to carry moisture into the soil and allow it to gradually percolate deeply.
☐ Plant cover break the force of wind at the ground level thus reducing loss of soil particles and reduce evaporation which would make soil dry and loose.
☐ Decayed vegetative matter provide humus which bind soil particles together.
                                                         Any 3 explained x 2 =

(6mks)

SUNSHINE
GEOGRAPHY P2
MARKING SCHEME

1. a) **Name two tree species of high commercial value in a coniferous forest.** **(2mks)** -
pine
- spruce
- Fir **(any 2x1 = mks)**
   b) **State three characteristics of Tropical hardwood forests which hinder exploitation**
- Trees are closely set / packed making it difficult to cut and penetrate into the forest
- -Trees have large massive/heavy trunks which make it hard to cut and haul
- Different / many species within a unit area
- trees take long to mature (65 – 100 years)
- large buttress roots make it difficult to cut the trees **(any 3x1 = (3mks)**

2. **State two factors that influence exploitation of minerals**
- Quality of the ore
- Size of the mineral deposit
- Value of the mineral
- Transport costs
- Availability of capital
- Availability of skilled personnel labour
- Demand for the mineral
- Political influence / climate
- Methods of extraction
- Level of technology Any 2x1 = (2mks) **b)**
   Describe how soda ash is extracted from Lake Magadi - Mined using a **bucket dredger** floating on the lake
   water.
- Dredger **digs out** trona from the lake bed upto 3m deep.
- Inside the dredger trona is **crushed into smaller pieces** and **mixed with** solution from the lake called Lake liquor.
- The trona and the solution is pumped into the factory through a pipeline for processing **(max 3mks)**

3. a) i) **Distinguish between population distribution and population density**
– Population distribution refers to the way people are spread out on the land while population density is the average
   number of persons per square kilometers. **(1mk) marks as a whole**
   ii)**What is dependency ratio?**
☐ This is the proportion of the population that is not involved in productive activities to t he one that is OR
☐ The ratio of the population that is dependent on the population that is working **(1mk)**
   b) **state three reasons for reduced fertility rate in Kenya**
- Late marriages / more girls attending school
- Modern career opportunities limit fertility rate / maternity leaves.
- Use of birth control measures lowering number of children a woman get.
- Urbanization leading to people opting to smaller families.
- Increase in the number of women opting to remain single. **(Max 3 mks)**

4. a) **Name two dairy cattle breeds reared in Kenya**
☐ Ashyire
☐ Guernsey
☐ Jersey
☐ Friesian
☐ Sahiwal **(2x1 = 2 mks)**
   b) **State three differences between beef farming in Argentina and Kenya.**

Argentina	Kenya
- Has more beef processing plants	- Has few processing plants
- Beef products are exported	- None of the beef products is exported / most consumed locally
- Animals have enough pasture	- Pasture may be scarce in the dry season
- Animals mainly transported by rail	- Animals mainly transported by road

-	Exotic breeds mainly reared	-	Both exotic and locally indigenous breeds are reared
-	Corn is used to fatten the beef cattle	-	Animals mainly rely on natural pastures

Any 3 complete comparison x 1 =

3mks

5. a) Give two advantages of wood as a source of fuel
- available nearly throughout the world
- there are no maintenance costs
- cheap source of energy
- ashes can be used for other purposes e.g plastering traditional houses   **Any 2x1 = 2mks) b)**
  State three conditions necessary for the formation of oil
- presence of sedimentary rocks
- Presence of organic remains fossils
- presence of non-porous rocks overlying the porous rocks
- presence of porous rocks to trap the oil
- presence of pressure to compress the organic matter   **(Any 3x1 = 3mks)**

6.a. i)
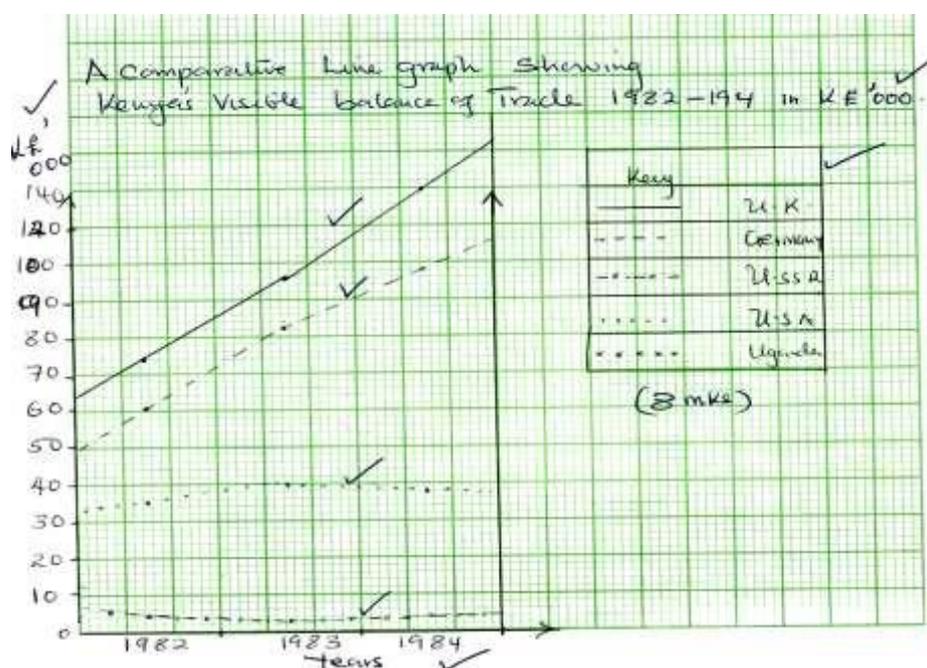
   ii) plotting small values is difficult where the range is large
- The total amount of each variable in the group cannot be known at a glance
- Locating the position for the point is difficult   (3mks)
b. i) Balance of trade is the difference in value between the visible imports and visible exports of a county.   ii)
     Calculating the balance of trade.   (2mks)
     Exports   347,000
     Imports   400,300
                 53,300
                 53,300,000
c. i) Major imports :   - Motor Vehicles
                        -    Machinery
                        -    Electronics
                        -    Petroleum **Major exports:**
                        -    Horticulture
                        -    Tea/coffee
                        -    Soda ash / fluorspar/ cement
   i) Kenya has an unfavourable balance of trade.

- Kenya exports mainly agricultural raw materials which are of law value and imports manufactured goods which are of high value.
- The agricultural raw materials face not only stiff competition from other counties / but also the quota system in the world market which leads to reduced sales and less earnings.
- The minerals and other goods such as curio are of low quality hence generate little earnings

   d) Measures to achieve a favourable balance of trade
- Development of other sources of energy to reduce on the importation of fuels
- Establishment of import – substitute industries to reduce imports of commodities
- Restriction on importation of luxury items through high taxation to save the county foreign exchange
- Diversifying agro-exports such as horticulture that has a large market and earns more
- Increasing invisible exports such as tourism, shipping and insurance that is not vulnerable to weather adversities.

7. a) i)Wheat growing areas in Canada
- Alberta; Saskatchewan; Mamtoba **ii)**

   Physical factors – Kenya
- ☐ Gently sloping/fairly level – allows proper drainage and mechanization
- ☐ Volcanic soils which are well drained – provide proper anchorage for wheat stalks
- ☐ Moderate r/fall – between 305mm – 1015mm $\longrightarrow$ sufficient for growing wheat
- ☐ Warm dry sunny spell which enhances ripening and harvesting of wheat
- ☐ Warm temperatures ranging from 15°C to 20°C – this facilitates maturity of wheat (for at least 3 months)
- ☐ High altitudes of 1500 mm – 2900 mm

b) i) Comparison Wheat Kenya Vs Canada.
- Cultivation – small scale farmers doing it manually / mechanized while in Canada all the work is mechanized. - Kenya small scale $\longrightarrow$ Canada large scale. ii) Harvesting – in Kenya both manual (small farmers) and mechanized while in Canada all work mechanized.

   iii) Marketing – in Kenya all the wheat is consumed locally while in Canada – consumed locally and the bulk exported.

b. i) Human and economic problems in Canada.
- ☐ Monoculture has led to soil exhaustion – low yields
- ☐ Over production of wheat – too much surplus and low income.
- ☐ Fluctuation of market prices, affects the farmers income and it makes it difficult to plan ahead. **c. i) Human / economic problems in Canada**
- ☐ Fluctuation of market prices for wheat exports affects the farmers income and makes it difficult to plan ahead.
- ☐ Overproduction of wheat
- ☐ Monoculture has led to soil exhaustion, resulting in low yields

8. a i) Countries found in NW pacific fishing ground
- ☐ Japan - Malaysia
- ☐ China - Indonesia

   ii) **Explain four physical factors that favour fishing in the above fishing ground.**
- ☐ Numerous Islands provide good breeding ground for fish hence fishing.
- ☐ Extensive continental shelf are shallow providing light for the growth of Plankton which food for fish.
- ☐ Cool temperature arising from the meeting of cold Kamchatka and the warm Kurosiwo providing conditions for Plankton survival.
- ☐ Japan is generally mountainous which does not favour Agriculture making fishing the only economic activity. **b) Describe the following methods of fishing**

   i) Drifting (4mks)
- ☐ The net is vertically hanging in water
- ☐ They are fitted with floats on the upper edge and weights below and placed a few meters below the water and pulled by powerful boats called drifters
- ☐ When fish swim into the net they are entangled by their gills and cannot get out of the net.
- ☐ Once enough fish are caught the net is hauled onto the boat and fish is removed. **Any 4 x 1 = (4mks) ii) Purse seine** (4mks)
- ☐ The purse seine net is laid in a circle to enclose a school of fish.
- ☐ At the bottom of the net are rings through which passes a rope
- ☐ One end of the rope is attached to a boat and the other part is pulled by another boat around a school as fish.

☐   When the circle is completed the rope is pulled to close the net forming a bow- like shape hence trapping fish.

☐   The net is them hauled to the shore and fish is removed.   **4 x 1 == (4mks)**

C. Compare fishing in Kenya and Japan under the following sub-headings:

   i) Fishing ground.   **(2mks)**

☐   Japan main fishing ground is marine while Kenya"s is mainly mainland.

   ii) Climate.   (2mks)

☐   Kenya"s climate is warm discouraging growth of planktons and variety of fish species therefore fishing is not elaborate while Japan"s climate is cool favouring Planktons hence intensive fishing.

   d. State 3 significance of fishing to the economy of Kenya.   **(3mks)**

☐   Export of fish earn foreign exchange used to develop the economy.

☐   Fish creates employment opportunities which earns income that improves their standard of living.

☐   Fishing wastes produce raw materials to produce Lubricants, fertilizer and cosmetics.

☐   -Fishing is a source of government revenue through taxation which is invested in other sectors.

☐   Fishing is a sport that attracts tourists thus generate foreign exchange for the country.

☐   Fishing stimulates and promote establishment of industries e.g ship building repair and net making.

                                                     Any 3 x 1   (

3mks)

MWINGI CENTRAL SUB-COUNTY JOINT MOCK
KENYA CERTIFICATE OF SECONDARY EDUCATION
GEOGRAPHY PAPER 1 – 312/1
SECTION A

Answer **All** the questions in this section.

1.   (a)   Define the term Earth Movements   (2marks)

     (b)   State three causes of Earth Movements   (3marks)

2.   (a)   What is a rock   (2marks)

     (b)   Give three classes of rocks according to their mode of formation   (3marks)

3.   Use the diagram below to answer the question that follows.
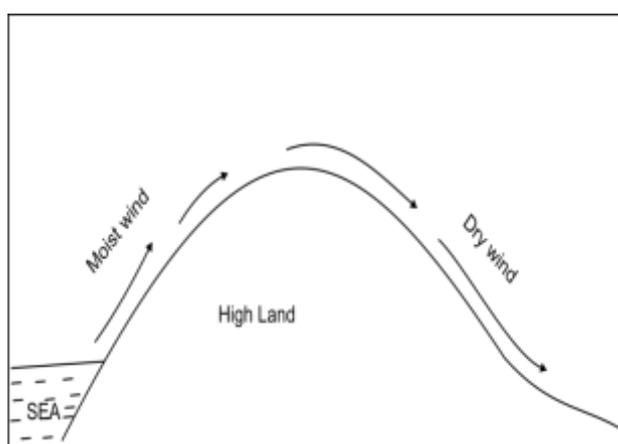
    Outline the process through which moist winds shown go through to eventually become dry winds (5mks)

4.   (a)   Name two types of folds   (2mks)

     (b)   Name fold mountains found in the following continents

          (i)   South America   (1mk)

          (ii)   South Africa   (1mk)

          (iii)   Europe   (1mk)

5.   (a)   Name two types of mass wasting   (2mks)

     (b)   Give three positive significance of weathering to human activities   (3mks)

SECTION B

Answer questions SIX and any other TWO questions from this section.

6.   Study the map of Migwani 1:50,000 (sheet 151/1) provided and answer the following questions.

(a)   (i) Measure the distance along the dry weather road from Junction at 700nye to Junction at MUTITU NDOOA
Shopping Centre   (2mks)

(ii) What is the area enclosed by the road from Grid reference 108 618 to Grid reference 130706 (Give your
answer in km^2)   (2mks)

(b) (i) Citing evidence from the area covered by the map identify three social services   (6mks)

(ii) Describe the drainage of the area covered by the map   (4mks)

(c) (i) What is the bearing of the Air photo principal point at grid square 1181 from Mboni dam (d)   (2mks)

Students from Musengo school carried out a field study of the course of River Ngoo.

(i) State three reasons why they needed a route map   (3mks)

(ii) Give three advantages of studying river through field work   (3mks)

7. (a) (i)   State two types of faults   (2mks)

(ii)   Describe the occurrence of compressional forces   (3mks)

(b)   Aided by a well labeled diagram, explain how tensional force might have led to formation of the R. Velly
(8mks)

(c)   Explain any four significance of faulting to human activities   (8mks)

(d)   Form four students carried out a yield study on a section of the Rift Valley

(i)   State two problems they likely faced during the study   (2mks)

(ii) Name any physical feature associated with faulting they might have seen during the study   (2mks)

8. (a) (i)   What is a Karst Scenery   (2mks)

(ii)   Using a well labeled diagram, show all the features found in underground limestone area (5mks)

(iii)   Explain any three factors which might influence the formation of features in 7(a) (ii), above (6mks)

(b)   (i)   What is an artesian basin   (2mks) (ii)

Explain any three conditions necessary for formation of an artesian basin   (6mks)

(iv) State three importance of artesian basin   (3mks)

9. (a) (i) Describe how Lake Victoria was formed   (4mks)

(ii) Explain how Lake Victoria has modified the climate of the surrounding areas (6mks)

(b)   Explain why some lakes in the rift valley have fresh water   (4mks)

(c)   State five economic uses of lakes   (5mks)

(d)   Explain how each of the following have affected Lakes in Kenya

(i)   Deforestation   (mks)

(ii) Industriaization   (mks)

(iii) Water needs   (2mks)

10. (a) (i)Name three types of vegetation   (3mks)

(b)   Use the diagram below of a mountain vegetation zone of a mountain in Kenya to answer the
following   questions.
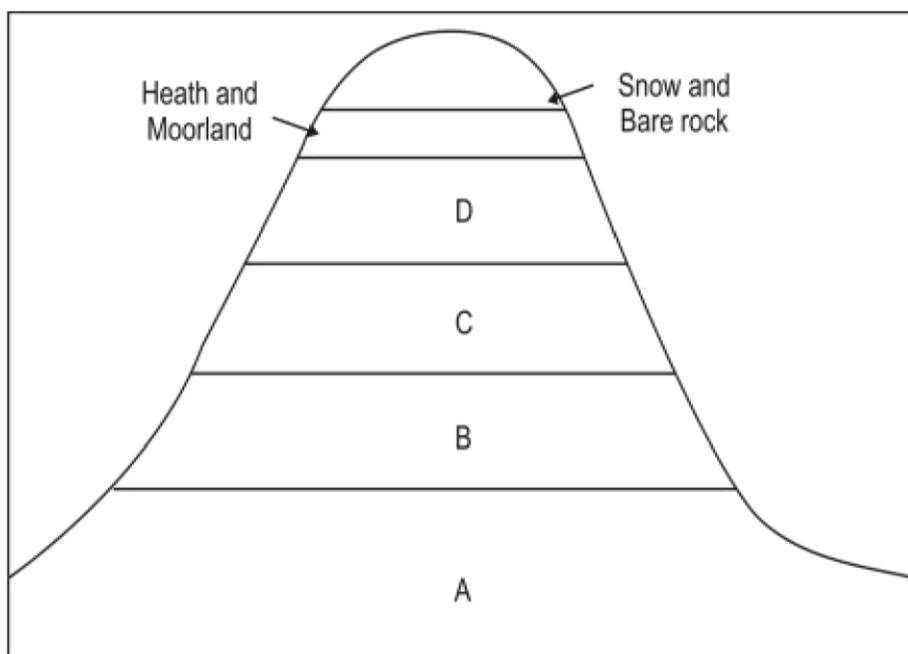
(i)   Name vegetation zones A, B, C and D
(4mks)
(ii)   Explain three importance of vegetation in zone C
(6mks)
(iii)   What is the Government doing to ensure that vegetation in zone B is not destroyed
(6mks) (c) You are required to carry out a field study on vegetation zone C.
(i) State any three methods you would use to collect your data   (3mks)
(ii) Explain why it is important to have a working schedule   (3mks)   **MWINGI CENTRAL DISTRICT SUB-COUNTY MOCK** *kenya certificate of secondary education*

JULY/AUGUST 2015
312/2
GEOGRAPHY PAPER 2
SECTION A

Answer all the questions
1. (a) What is industrial inertia?   (2mks)
        (b) State three characteristics of cottage industries in India   (3mks)
2. (a) Mention two types of mass communication   (2mks) (b) Give three advantages of air transport over land transport (3mks)
3. (a) Give three factors influencing population growth   (3mks) (b) State two positive significance of population growth (2mks)
4. (a) Name two factors favouring the growing of cocoa in Ghana   (2mks)
        (b) State three problems facing cocoa farming in Ghana   (2mks)
5. (a) State five ways through which fish farming contribute to the economy of Kenya   (5mks)
        (b) Name three environmental hazards   (3mks)
    SECTION B
    Answer question Six and any other Two Questions from this section
6. Use the table below showing numbers of livestock in Kenya between 2000 and 2003 in thousands.

Years	Cattle	Sheet	Goats	Pigs
2000	130	40	50	20
2001	120	45	60	15
2002	100	60	70	15

2003	90	70	80	10

(a) (i) Use the above data of livestock in Kenya to draw a cumulative bar graph   (7mks)

    (ii)   Explain the trend of cattle and give one possible reason for such a trend   (2mks)

(b) (i) Define pastoral farming   (2mks)

    (ii)   Explain three problems facing pastrolism farming in Kenya today   (6mks)

    (iii) State four activities undertaken by the Kenyan government to improve pastoralist life   (4mks)

    (iv)   State four physical factors favouring beef farming in Argentina   (4mks)

7.   (a) (i) Explain three physical factors which influence the growth of sugar cane farming in Kenya (6mks)

        (ii) State four problems facing sugarcane farmers in Kenya   (4mks)

        (iii) State four significance of sugarcane farming in Kenya   (4mks)

     (b) (i) Name two varieties of coffee grown in Kenya   (2mks)

        (ii) Explain how coffee is processed   (4mks)

        (iii) Name two areas in Kenya where coffee is grown   (2mks)

        (iv) State three human factors influencing the growth of coffee   (3mks)

8.   (a) (i) What is forestry   (2mks)   (ii) Define Agro-forestry   (2mks)

     (b) Explain how the following factors influence the distribution of natural forest

     (i)   Climate   (4mks)

     (ii) Altitude   (2mks)

     (iii) Soil   (2mks)

     (c) Give:

     (i)   Three characteristics of soft wood in Kenya   (3mks)

     (ii) Four characteristics of soft wood in Canada   (4mks)

     (d) Explain three positive significances of forest and forests products in Kenya   (6mks)

9.   (a) (i) Differentiate between Ecotourism and Domestic Tourism   (2mks)

 (ii) Give four reasons why the government of Kenya should promote eco-tourism   (4mks)

     (b) Explain how the following factors influence the distribution of wildlife in East Africa

     (i)   Human factors   (2mks)

     (ii) Vegetation cover   (2mks)

     (c) (i) Name three game sanctuaries in Kenya   (3mks)

 (ii) Explain two problems experienced in wildlife conservation in Kenya   (4mks)

     (d) (i) State four reasons why there is a decline in the number of tourist visiting Kenya in the year 2007/2008 (4mks)

 (ii)Give Four reasons why Switzerland has become a popular tourist destination than in Kenya (4mks)

10. (a) (i)What is visible trade?   (2mks)

 (ii)List three major import to Kenya from Japan   (3mks)

     (b) Explain four factors that influence internal trade in Kenya   (8mks)

     (c) State four ways in which trade is of significance to Kenya   (4mks)

     (d) Explain four benefits which members state of ECOWAS derive from the formation of the trading Block. (8mks)

GEOGRAPHY PAPER 1- 312/1
MWINGI CENTRAL SUB-COUNTY JOINT MOCK
kenya certificate of secondary education (k.c.s.e)
<u>MARKING SCHEME</u> <u>SECTION</u>

<u>A</u>

1. (a) Define Earth Movement   (2mks)
- It"s the Displacement or Movement of Crustal rock caused by Tectonic forces which originate and operate in the interior of the earth.
       (b) Causes of earth movements   (3mks)
- ☐ Magma movement
- ☐ Gravitational force
- ☐ Conventional current
- ☐ Isostatic adjustment

2. (a) What is a rock   (2mks)
- ☐ It is a hard compact material in the earth"s crust made of one or more minerals
       (b) Classes of rocks according to mode of formation   (3mks)
- ☐ Igneous rocks
- ☐ Sedimentary rocks ☐ Metamorphic rocks

3. Process in which moist winds go through to become dry   (5mks)
- ☐ Warm moist wind blows from the sea
- ☐ The warm moist wind is forced to rise over a mountain
- ☐ When the moist wind rise over a mountain, it is cooled
- ☐ When the moist is cooled, it condenses resulting into rain
- ☐ When it rains the wind is cooled and reaches / descend the leeward side of
- ☐ the mountain as cold dry wind

4. (a) Types of folds   (2mks)
- ☐ Simple symmetrical fold
- ☐ Assymetrical fold
- ☐ Overfold
- ☐ Isoclinal fold
- ☐ Recumbent fold
- ☐ Overthrust fold (Nappe: fold)
- ☐ Anticlinorum and synclinorium complex
       (b) Name of Fold Mountains found in the following confirurents
- ☐ South America – Arides
- ☐ South Africa – Cape Ranges
- ☐ Europe - Alps

5. (a) Types of Mass Wasting   (2mks)
- ☐ Rapid mass movement
- ☐ Slow mass wasting
       (b) Positive effects of weathering
(3mks)
- ☐ Lead to soil formation
- ☐ Weathering give beautiful scenery which are tourist attraction centres
- ☐ Weathering produce construction materials e.g. sand, stones and blocks
- ☐ Weathered product dissolved in sea water provide nutrients to marine animals
       SECTION B

6. (a) (i) Distance
                11km ± 0.5   = 2mks
         (ii) Area

Full sq = 25

+2 sq = $\frac{20}{2}$ = 10

= 35km^2 =2mks

(b) (i) Social service   Evidence

Education   Presence of schools

Administration   Presence of DO"s offices and chief camps

Health services   Presence of hospitals and dispensaries

Judicial services   Court houses   3 x 2 =

6mks

(ii)Drainage of the area covered by the map

☐ There are permanent rivers

☐ Most of the river tributaries drains their water to Ikoo River

☐ Most the rivers flow from North West to South East

☐ There are presence of bore holes

☐ There are dams e.g. Kauma dam, Boni dam etc

☐ Most rivers form dentritic drainage pattern   4 x 1 = 4mks (c) (i)

☐ Natural vegetation

☐ Scattered trees

☐ Scrubs   3 x 1 = 3mks

(ii) Bearing   = $226^0 \pm 1^0$ 2 x 1 = 2mks

(d) (i)Reasons for route map

☐ To know the direction

☐ To familiarize with the area of the study

☐ To estimate the distance

☐ To assist in making the time schedule

☐ To show distribution of features

☐ To avoid getting lost

☐ Estimate time likely to be taken   3 x 1 = 3mks

(ii)Advantages of studying river through field work

☐ To enable student relate what they have learnt in classroom

☐ Students are able to count the number of tributaries

☐ Students are able to gauge the impact of river in the area

☐ Students are able to find the use of river   3 x 1 = 3mks

7. (a) (i)Two types of faults   (2mks)

☐ Normal fault

☐ Reverse fault

☐ Tear/shear fault   (3 x 1 = 3mks)

(ii) Occurrence of compressional forces:

☐ Starts in the upper mantle which is molten

☐ Coventional current in the mental exerts frictional drag with the same layers/crustal layers

☐ Crustal rocks moves toward one another – compressional force   (3 x 1 = 3mks)

(b) Formation of Rift Valley by tensional forces

Step 1

Step 2

Tensional Force ←

Tensional Force →

Step 3

Normal Fault Develops

←   →

tensional force leads to development of normal faults

Step 4

Rift Valley
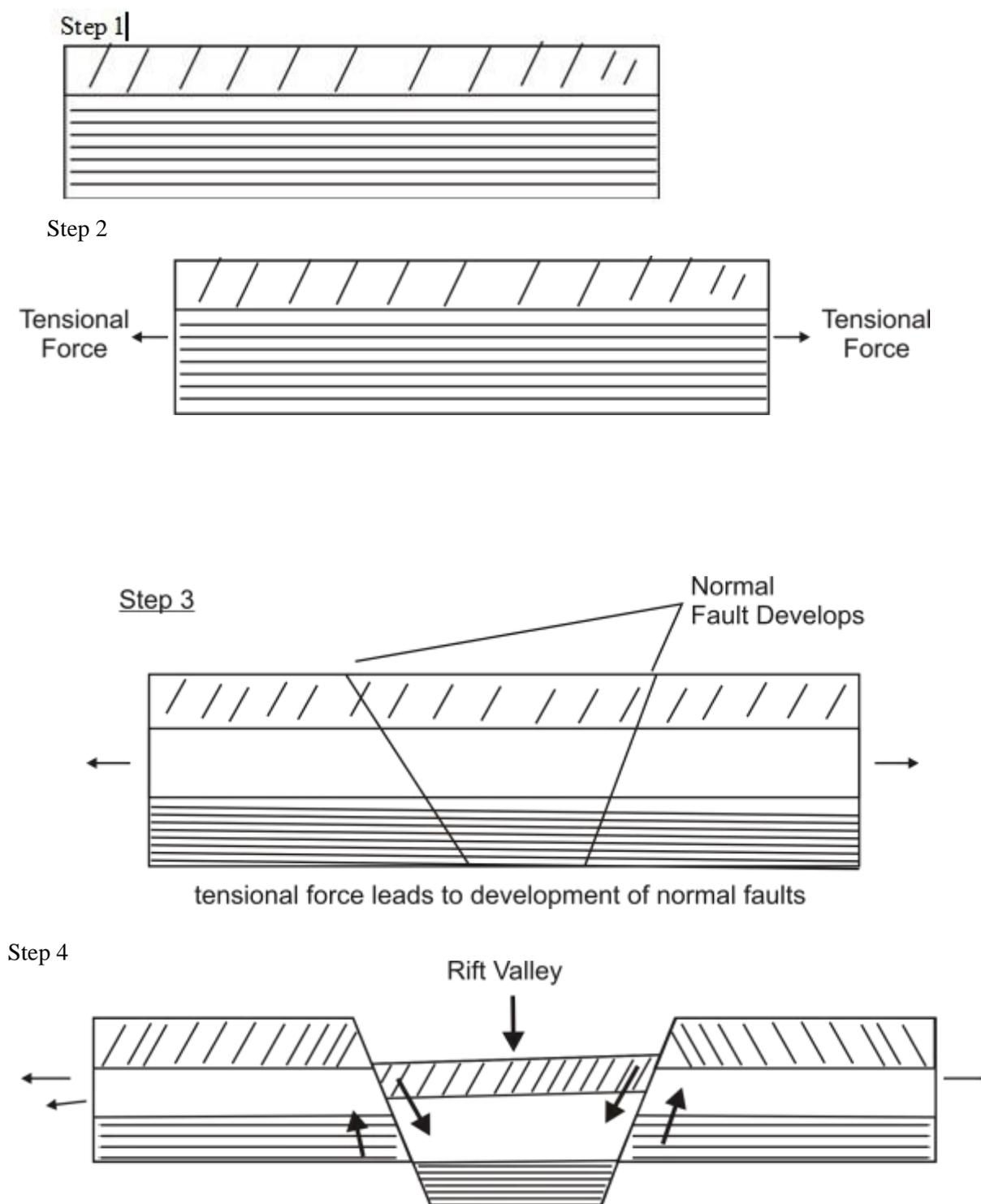
NB: Each step 2 mks   (4 x 2 = 8mks)

(c) Significance of faulting to human activities

(i) Leads to formation of lakes e.g. Lake Naivasha – which provide water for domestic, industrial use and irrigation

Also we get fish from the lake

(c)

☐   Formation of hot springs and geysers – production of geothermal in Olkaria Keya

☐   Block mountains e.g. Ruwenzori receive high rainfall – Agriculture

☐   Features formed e.g. fault scarps attract tourist – foreign exchange

- Vertical fault across a river may form a water fall – suitable for dam
- construction – generation of hydro-electric power
- Disruption of communication line e.g. railways
- Subsidence of land which may lead to loss of life and property
- Faulty across a river may lead to disappearance of a river
  Any other relevant point   (4 x 2) = 8mks
      (d) (i)   Problem they likely faced during the study
- Adverse weather condition i.e. rainfall
- Difficult terrain to move on i.e. steep slopes
- Attach by wild animals i.e. sneaks   (2 x 1 = 2mks)
      (ii) Physical features they likely saw
- Escarpments
- Block mountains
- Lakes
- Hot springs and geysers   (2 x 2 = 2mks)
- Artesian Basin (2mks)

8. (a) (i) Karst Scenery   (2mks)
      These are features formed in an area with limestone rock.
   (ii) Diagram showing underground features found in Limestone area   (5mks)
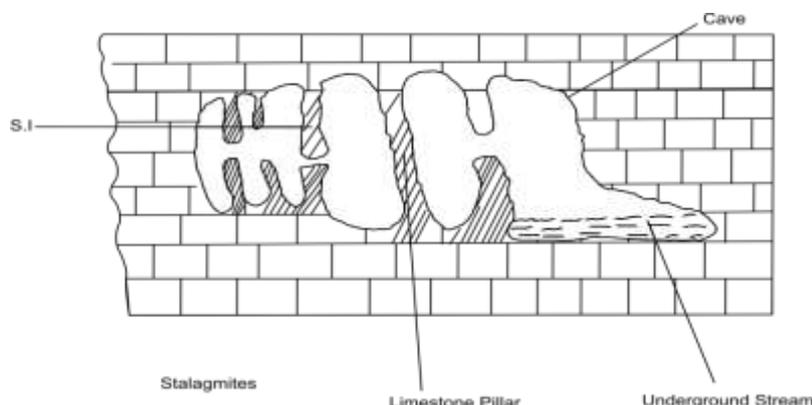
   (iii) Factors leading to formation of Karst Scenery   (6mks)
- Presence of hard well jointed rock to allow permeability of water underground
- Hot and humid climate with abundant rainfall
- Water table should be far below the surface to allow water percolate down rocks
(b) (i)It is the stratum in the earth surface in which one or more aquifer are enclosed above and below by an impermeable strata
      (ii)Condition necessary formation of an Artesian basins   (6mks)
- Aquifer should be of the same permeable material
- Aquifer must be exposed in areas with sufficient precipitation
- Aquifer must lie in between two impermeable strata of rock to retain water
- The basin must dip toward a pegion where the land surface is lower than it"s exposed ends   (c)
Importance of Artesian Basin

- ☐ Provide water for irrigation
- ☐ Provide water for domestic and industrial use
- ☐ Encourage settlement since it is a source of water 9. (i) Describe how Lake Victoria was formed.
  Formed when the earth surface down warped and titled forming a hollow depression that was filled with water
  (ii) How Lake Victoria influence the climate of the surrounding areas
- Heavy rainfall due to moisture from the lake
- High temperature due to low altitude caused by the depression
- Availability of water has attracted the industrial set up that pollute the environment   (3 x 2) = 6mks (b) Why some lakes in the rift valley have fresh water
- ☐ Presence of surface outlets through which excess salt deposits are drained away
- ☐ Some of the lakes have sub-terranean outlets which drain the salt from the lake beds
- ☐ Some have regular in flow of fresh water which dilutes the salts keeping the water fresh
- ☐ Some are situated in areas of low temperature thus low evaporation rates
- ☐ Some are situated in areas of high rainfall which keep water fresh   4 x 1 = 4mks   (c) Economic uses of Lakes
- ☐ Fishing
- ☐ Transport
- ☐ Irrigation
- ☐ Production of H.E.P
- ☐ Source of water for industrial and domestic use   5 x 1 = 5mks
  (d) (i)Deforestation
       Rivers pouring water into lakes dry up as their sources are interfered
       (ii)Industrialization: Water matter/sewage is let to spill in lakes polluting the water
       (iii)Water weeds: It leads to depletion of fish breeding grounds and affect transportation

10. (a) (i)Types of vegetation   (3mks)
- ☐ Natural vegetation
- ☐ Derived vegetation
- ☐ Cultivated vegetation   (3 x 1 = 3mks)
       (b) (i)Vegetation zones   (3mks)
       A   -   Savana grassland
       B   -   Woodland
       C   -   Mountain forest
       D   - Bamboo forest   (4 x 1 = 4mks)
       (ii)Importance of vegetation in zone C   (6mks)
- Purification of air in biosphere
- Roots and plants bind soil together and check rain intensity – control soil erosion
- Habitat for wildlife – attraction of tourist generating foreign exchange
- View material for industries e.g. pulp, paper
- Some plants used in manufacture of medicine
- Aesthetic value – makes land beautiful
- Water catchment area – source of rivers   (3 x 2 = 6mks)
       (iii)What the government is doing to protect forest   (6mks)
- Reforestation programs
- Legal action – law governing harvesting of trees
- Employment of forest guards
- Gazeting areas to become forest resource   c.(i)Methods of data collection used
- ☐ Observation
- ☐ Photography
- ☐ Experimental
- ☐ Interviewing   (3 x 1 = 3mks)

(ii)Importance of a working schedule
- Avoid time wasting
- Ensure all areas covered
- Get time estimate to be used
- Enable them get all relevant equipment e.g. tools
- Any other relevant point   (3 x 1 = 3mks)

MWINGI CENTRAL SUB-COUNTY JOINT MOCK
KENYA CERTIFICATE OF SECONDARY EDUCATION (K.C.S.E)
312/2 GEOGRAPHY PAPER 2
MARKING SCHEME

SECTION A

1. (a) Industrial inertia
   This is the ability of an industry to continue existing in an area despite the fact that the original influencing factors has ceased to exist 2 x 1 = 2mks
      (b) Characteristics of cottage industries in India
   ☐ Require little capital investment
   ☐ Industries are home based
   ☐ Industries owned by individuals; families or groups
   ☐ Use locally available raw materials
   ☐ Labour is provided by individuals or members of the family
   ☐ Industries are found almost everywhere in the country
   ☐ Simple tools are used   3 x 1 = 3mks

2. (a) Two types of mass communication
   ☐ Radio
   ☐ Televisions
   ☐ Internet
   ☐ The Press
   ☐ Films and videos (Any other relevant)   2 x 1 = 2mks
      (b) Advantages of air transport
   ☐ It is faster
   ☐ No traffic congestion
   ☐ Have few accidents
   ☐ Best for transporting perishable goods
   ☐ Helicopter access the most remote parts   (3 x 1 = 3mks)

3. (a) Factors influencing population growth
   ☐ Fertility rate
   ☐ Mortality rate
   ☐ Migration   (3 x 1 = 3mks)
      (b) Significance of population growth
   ☐ Provide market
   ☐ Provide labour
   ☐ Stimulate agriculture and industrial development
   ☐ Facilitate urbanization   (2 x 1 = 2mks)

4. (a) Factors favouring growing of cocoa in Ghana
   ☐ Evenly distribute rainfall not less than 1200mm
   ☐ Temperature ranging from 17^0C - 25^0C
   ☐ Deep, well drained fertile soil
   ☐ Protection from strong wind   2 x 1 = 2mks
      (b) Problems facing cocoa farming
   ☐ Destruction of a cocoa plants by fire outbreaks/strong winds
   ☐ Poor infrastructure
   ☐ Pest and diseases
   ☐ Inadequate labour supply

5. Ways through which fish farming contribute to the economy of Kenya
   ☐ Create employment

□ Revenue for the government
□ Provide foreign exchange
□ Source of raw material to the related industries
□ Source of food to the people   5 x 1 = 5mks

SECTION B

6. (a) (i)Comparative Line Graph Showing Number of Livestock in Kenya between
2000 – 2003
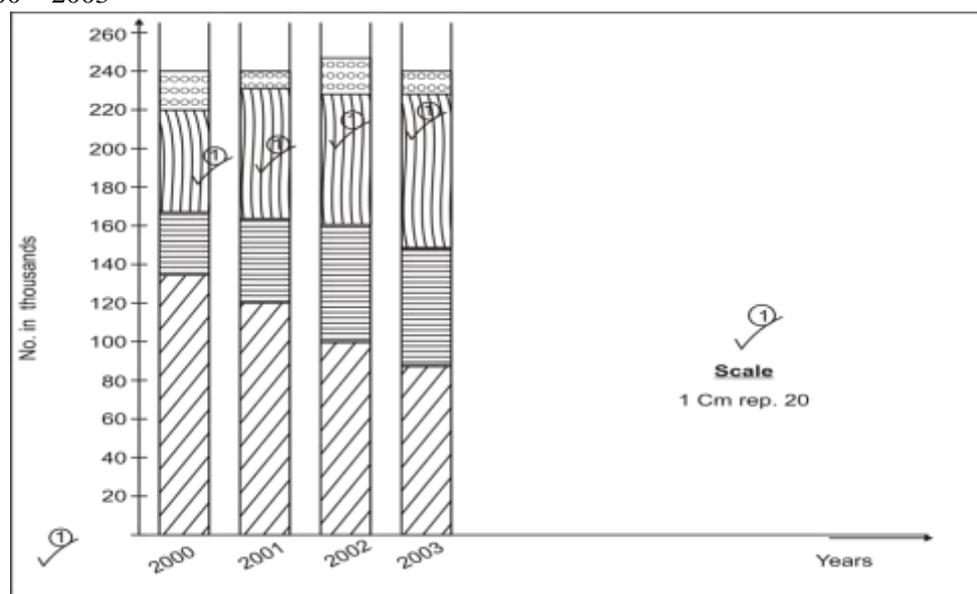
(ii) Treach of cattle
No. of cattle is decreasing over years may be due to:
□ Climatic changes e.g. drough
□ Population pressure – decrease in land for keeping cattle
□ Diseases which kills cattle
□ Lack of government support (Any other relevant point)
NB: Explaining one mark; reason   1mk b.
(i)   Definition of pastoral farming
-        Extensive grazing of animals on the natural pasture with constant or seasonal migration
(ii) 3 problems facing pastrolism in Kenya
□ Shortage of pasture and water – low and unreliable rainfall
□ Pest and diseases – kills many animals
□ Poor transport systems- difficult in taking animals to market
□ Native breeds – low quality
□ Large herds of animals – leads to soil erosion and desertification
□ Poor marketing systems i.e. no co-operatives
Any other   (3 x 2 = 6mks)
(iii)Activities undertaken by government to improve pastrolist life
□ Provision of water
□ Security
□ Cross-breeding to improve the quality of animals
□ Educating pastrolist to know importance of keeping small herds of
□ animals

☐   Provision of extension services   Any other (3 x 2 = 6mks

(iv) Physical factors favouring beef farming in Agriculture

☐   Replace of course granes with alfalfa and corn – improved pasture

☐   Maritime climate makes grazing possible throughout the year

☐   Vast grassland in the pampus which are suitable for grazing

☐   Availability of water   (4 x 1 = 4mks)

7   (a) i)Physical factors influencing growth of sugar cane   (6mks)

☐   High temperature $20^0 = 27^0C$

☐   Heavy and evenly distributed rainfall from 1000 – 1500mm annually

☐   Deep well drained fertile soil

☐   Undulating or genty sloping landscape to allow. Use of machines

☐   Hot humid climate

ii) Problem facing sugar cane farmers   (4mks)

☐   Delayed payment by sugar cane millers to farmers

☐   Fire outbreak which destroys sugar estates

☐   Prolonged draught lower the yield of sugar cane

☐   Pest and diseases which lower the yield of the farmer

☐   Stiff competition from imported sugar

☐   High cost of farm input which reduce profit margin of the farmer

☐   Mismanagement of sugar companies make it difficult for farmers to plan

iii) Significance of sugar cane farming to Kenya   (4mks)

☐   Create employment to those working in sugar estates and sugar processing factories

☐   Raise standard of living of farmers

☐   Improved infrastructure between sugar estates and sugar processing factories

b) i)Varieties of coffee grown in Kenya   (2mks)

☐   Arabica coffee

☐   Robusta coffee

☐   Ruiru II coffee

ii) Processing of Coffee   (4mks)

☐   When coffee berries reach the factor, they are weighed and taken to machine for pulping ☐ The outer shell is removed

☐   The berries are fermented and dried

☐   The inner thin husk is removed and coffee berries are dried and packed ready for export

☐   Coffee beam can dried, roasted and ground into powder for sale   iii) Areas where coffee is grown in Kenya ☐ Kiambu

☐   Murang‟a

☐   Thika

☐   Kisii

☐   Kakamega

☐   Machakos

☐   Meru

☐   Taita hill

iv) Human factor influencing coffee growing   (3mks)

☐   Availability of labour

☐   Coffee processing factories

☐   Good infrastructure ☐ Availability of capital

8. (a) (i)Forestry

-      It is the Science of developing, cultivating and managing of forests

(ii) Agro-forestry   (2mks)

☐ It is the cultivation of crops together with trees on the same piece of land (b) (i)
    Climates: Aspect of climate which influence forest distribution are:

- Rainfall /precipitation – forest grows in areas with heavy precipitation e.g. over 1200mm
- Low rainfall discourage forest growth

  (ii) Temperature – high temperature over 24^0C and humid within the tropical region accelerate plant growth

☐ Low temperature discourage plants growth

(ii) Altitude – Altitude influence rainfall and temperature   (2mks)

☐ Very high altitude e.g. over 3500M above sea level are not suitable for plant growth since they are too cold

☐ The lower level of tropical mountain lake are suitable for forestry growth

(iii) Soil   (2mks)

☐ Deep fertile soil encourage growth of forest

☐ Shallow and less fertile soil discourage growth of vegetation

C. (ii) Characteristics of softwood in Kenya   (3mks)

- Cover 3% of the total land mass
- Located in Kenya highland
- Consist both indigenous and exotic species
- They are both natural and planted
- Grow on deep fertile soil
- Take short time to mature
- Consist short time to mature
- Consist of only one plant species
- Harvesting done in small scale

  (ii) Characteristics of softwood in Canada   (4mks)

☐ Cover 60-70% of total land mass ☐ Its mainly a natural forest ☐ Trees don¨t grow in pure stand

☐ Forest grow in shallow, thin soil due to glacial Erosion

☐ Tree species are indigenous

☐ Harvesting of trees is done in large scale

☐ Trees take long time to mature 40-70 years

8. (d) Significance of forest product in Kenya   (6mks)

☐ Create job opportunities

☐ Source of raw materials in paper and pulp industries

☐ Source of timber for construction and making furniture

☐ Provide fuel e.g. firewood and charcoal

☐ Make the environment beautiful

☐ Habitat for wild animals

☐ Provide poles for fencing and supply of electricity

☐ Control soil erosion

☐ Act as water catchment areas

9. (a) (i)Difference between Ecotourism and domestic tourism
    Ecotourism is an environment friendly tourism whereby a tourist enjoy watching while at the same time protects what nature has provided while domestic tourism is the visit of citizens of a country to places of interest within the country.

    (ii) Reasons why the government of Kenya should promote ecotourism.

☐ For the local community to gain economically from the proceeds of tourist site

☐ For the community to appreciate the conservation efforts to reduce cases of poaching.

☐ To educate people on the importance of conservation and management of wildlife

☐ To offer employment opportunities to the local people hence increasing incomes and alleviating poverty

☐ To equip the local people with Education and skills thereby empowering them (b) (i) Human factors

☐ Human activities like creation of animal orphanages, sanctuaries has created artificial homes for endangered species

☐ Illegal hunting/felling of trees have led to destruction of wildlife habitat hence they move to other safer areas

☐ Construction activities e.g. roads and buildings have also displaced wildlife from their original habitants

☐ At times, human activities create environments for the protection of wildlife   (2mks)

   (ii) Vegetation cover

     Different vegetation cover offers habitat for different types of wildlife.

     Vegetation cover also offers food for variety of herbivores   (2 x 1 = 2mks)

c.(i)Examples of game sanctuaries in Kenya

☐ Ngunia rhiro sanctuary

☐ Maralal sanctuary

☐ Olarti Nyiro sanctuary   3 x 1 = 3mks ii)

   Problems experienced in wildlife conservation in Kenya

☐ Poaching for game meat, skin, hides which has reduced the numbers of wildlife

☐ Drought which causes drying up of pasture/vegetation/water points

☐ Land use conflicts e.g. with pastoralists over pasture leading to destruction of wildlife

☐ Inadequate trained personnel to manage wildlife

☐ Bush fires caused by poachers killing wildlife

☐ Environmental pollution leading to death of wildlife

☐ Migratory habits of many animals and birds make it difficult for their protection against poachers

   d) i)Reasons for decline in number of tourists visiting Kenya in year 2007/2008

☐ Heightened political tension as a result of run up to general election

☐ Post election violence in 2008 which scared away many tourists

☐ Travel advisories by foreign countries advising their people not to visit Kenya

☐ Global financial meltdown as a result of global economic recession   (4 x 1 = 4mks)

    ii)Reasons why Switzerland has become a popular tourist destination than Kenya

☐ Political neutrality which removes any travel restrictions to the country

☐ Fluency in many languages that enable easy communication

☐ Its accessibility to many European countries

☐ Hospitality of the Swiss that encourages tourists

☐ Presence of trained personnel who provide excellent services

☐ Effective financial systems, which makes it easy for transaction to be made   4 x 1 = 4mks

10. (a) (i)   Visible trade involves exchange of goods between countries/it involves the import and export of goods   1 x 2 = 2mks

      (ii)   Major imports to Kenya from Japan

☐ Automobiles / motor vehicles parts

☐ Textiles

☐ Machinery/electronic appliances/radios/TVs

☐ Watches / precision instruments   3 x 1 = 3mks

   (b) Factors that influence internal trade in Kenya

☐ The demand for a variety of domestically produced goods leads to expansion of trade

☐ True cultural differences lead to distinctive specialization in production of goods for exchange

☐ The production of similar goods/products by different regions limit the market

☐ potential/Different goals enhance trade among different regions

☐ The low purchasing power by a majority of Kenyans limits the market for goods produced

☐ Security encourages expansion of trade   4 x 2 = 8mks

   (c) Ways in which trade is of significance to Kenya

☐ Trade generates revenue through taxation of goods and services

- Trade creates employment opportunities in the industries that are established/create self employment
- The demand for goods stimulate industrial growth
- The exports of goods enable the country to earn foreign exchange
- The needs to reach far off markets leads to expansion of transport facilities
- Trade stimulate specialization in the production of goods
- Trade enhances cooperation between Kenya and the trading partners   4 x 1=4mks
    (d) Benefits which the member states of ECOWAS have derived from the creation of the trading Bloc
- The volume of trade has been boasted as a result of an expanded goods in the region
- More transport facilities have been constructed to link the members states of the cooperation
- The removal of trade barriers has extended the market for the finished products
- The transfer of technology/capital within the trading area has been enhanced
- Cooperation in other fields such as education/health and communication has been enhanced
- The reduction in hostilities between members countries has enhanced peace resulting in rapid economic development

KAMDARA JET 2015
312/1
GEOGRAPHY
PAPER 1 SECTION
A:

Answer ALL the questions in this section

1. Give **four** zones of the atmosphere.   (4mks)
2. (a) List the **two** types of earth movements.   (2mks)
   (b) Describe how gravitative pressure can cause earth movements.   (3mks)
3. (a) Define the term Aridity.   (2mks)
   (b) Outline **three** factors that influence wind deposition.   (3mks)
4. (a) Differentiate between ice caps and ice bergs.   (2mks)
   (b) List **three** ways through which ice moves.   (3mks)
5. (a) Name **two** types of tides.   (2mks) (b) Explain **two** ways through which the sea acquires its load.
   (4mks) **SECTION B:**

Answer question 6 and any two other questions from this section

6 (a) Study the map of Migwani (sheet 151/1) provided and answer the following questions.
   i)   Convert the scale of the map to statement scale.   (1mk)
   ii)   ) What is the approximate Latitudinal and Longitudinal position of Ikoo school and shops grid square
          0570.   (2mks)
   iii)) What is the six-figure Grid Reference of Kisini dam to the North East.   (1mk)
   iv)   What is the approximate height of Kyoomihill.   (2mks) v)
         Name **two** man-made features found East of Easting 00 and North of Northing 80.   (2mks)
(b) i. Draw a rectangle from Grid Reference 0563 to 1363 and from Grid Reference 0570 to 1370.   (2mks)
   ii. On the rectangle mark and name the following: (4mks)
      •   ggSteep slopes
      •   Mutitu trading center
      •   Main River
      •   Road E728
      (c)   Citing evidence from the map give **three** social services offered in the area covered by the map.
   (6mks)
      (d)   Describe the drainage of the area covered by the map.   (5mks) 7 (a) i.)Define the term
   denudation.   (2mks) ii). Explain how the following factors influence weathering.
          ☐ Topography   (2mks) ☐ Rock Structure.   (2mks) (b) Describe the process of block separation
in mechanical weathering.   (5mks)
   (c) Explain the importance of weathering to the economy of Kenya under the following:
      •   Tourism   (2mks) ☐ Agriculture   (2mks)
   (d) i.)What is mass movement.   (2mks)
      ii). Give two forms of slow mass wasting.   (2mks)
iii). Describe the following forms of landslides
          ☐ Rock slides   (3mks) ☐ Avalanche   (3mks)
8   (a) i. Name three features that form as a result of river erosion.   (3mks)
      ii. Describe the following processes of river transportation
          ☐ Suspension   (2mks) ☐ Traction   (2mks)
      (b)   i. Using a well labeled diagram describe how a natural levee forms.
      (5mks)   ii. Outline two factors that may lead to the flooding of a river with natural levees.
          (2mks)   iii. Give two ways in which rivers can improve food security in a region.
                (2mks)
      (c)   Your class is planning to carry out a field study of a river in its youthful stage.
       i. Formulate three hypothesis for your study.   (3mks) ii. Give
      three reasons why it would be necessary to write a work schedule for the study.   (3mks) iii. In what
      ways would you record the data collected from the study.   (3mks)

geography

9. (a) i. Define the term Rock. (2mks)
   ii. Briefly explain the following types of rocks

   □ Igneous rocks (2mks)

   □ Sedimentary rocks. (2mks)

   □ Metamorphic rocks. (2mks)

   (b) i. Distinguish between permeable and impermeable rocks. (2mks)
   ii.Describe how the following lakes were formed

   □ Lake Masinga (3mks)

   □ Lake Kanyaboli (4mks)

   iii) Explain two ways in which Lake Victoria influences the climatic conditions of the area (4mks)

   (c) Explain two negative effects of lakes. (4mks)

10 (a) i. Name three surface features in limestone areas. (3mks)
   ii. Differentiate stalactites from stalagmites. (2mks)
   iii. Explain two factors that influence formation of features in limestone areas. (4mks)

   (b) i. Define the term soil. ii. (2mks)
   What is meant by the following terms?

   □ Soil catena (2mks)

   □ Soil profile (2mks)

   iii.Outline three ways through which mulching helps improve soil fertility. (3mks)
   (c) Your class is to carry out a field study in an area of polluted soil.
   i. Give two objectives of your study. (2mks)
   ii. Give two negative affects you may identify that could have been caused by the polluted soil (2mks)
   iii. What is the likely cause of the soil pollution in the area of study. (3mks)

geography

KAMDARA JET 2015
312/2
GEOGRAPHY
PAPER 2
SECTION A (Answer all questions)

1) a) What is agriculture?   (2mks) b) Give three types of agriculture?   (2mks)
2   a)Name two minerals mined in Kenya through open cast mining method.   (2mks)
     b) State three environmental problems of open cast mining method.   (3mks)
3   a)Give two types energy produced using water .   (2mks)
     b) State three problems facing energy management and conservation.   (2mks)
4   a) What is crude birth rate?   (2mks)
     b) Give three effects of rural to urban migration   (3mks)
5.   a) Distinguish between extractive and manufacturing industries
                              (2mks) b) Give three
     reasons why the pulp and paper industry was located in
     Webuye   (3mks) **SECTION B**
     Answer question 6 and any other two Questions
6.   Use the table below to answer the following question Transport
     value output 2006-2009 minimum in Kenya

	2006	2007	2008	2009
Road	12,500	25,600	36,200	38,299
Air	20,000	23,100	27,500	35,000
Railway	10,500	16,200	22,130	24,600

     a) i) Draw a comparative bar graph for the Road, Air and Railway transport between the year 2006-
        2009   (6mks) ii)
     Analyze and interpret the graph you have drawn   (2mks) iii) what
     are advantages of using a comparative bar graph   (2mks) b)
     Calculate the total transport for the year 2008   (2mks)
     c) i) Identity four means of communication used in Kenya   (4mks) ii)
     Explain three challenges facing internet service in Kenya.   (6mks) d)
     Explain three advantages of using water transport   (3mks)
7   a) Explain three ways in which man influences distribution of wildlife   (6mks)
     b) Explain five benefits Kenya derives from tourism
              (10mks)
     c) State three measures Kenya needs to undertake to attract more tourists in the country   (4mks)
     d) Form 4 students from a school in the coastal region carried out a field study on tourist attraction within the coast ;
         i) Give three physical tourist attraction they may have studied   (3mks)
         ii)Give two reasons why they needed a map   (2mks)
8) Name two by products when sugar cane is processed   (2mks) a) Name
     three districts in Kenya where Sugarcane is grown on commercial basis   (3mks)
     b) Explain two physical and two human conditions necessary for the growing of sugarcane   (8mks)
     c) Explain two reasons why Kenya faces Sugar shortage despite the fact that she is a major producer of the same
                                                            (4mks)
     d) Explain four ways in which Kenya benefits from Sugarcane growing   (8mks).
9. The map below shows world distribution of forests. Use it to answer question a
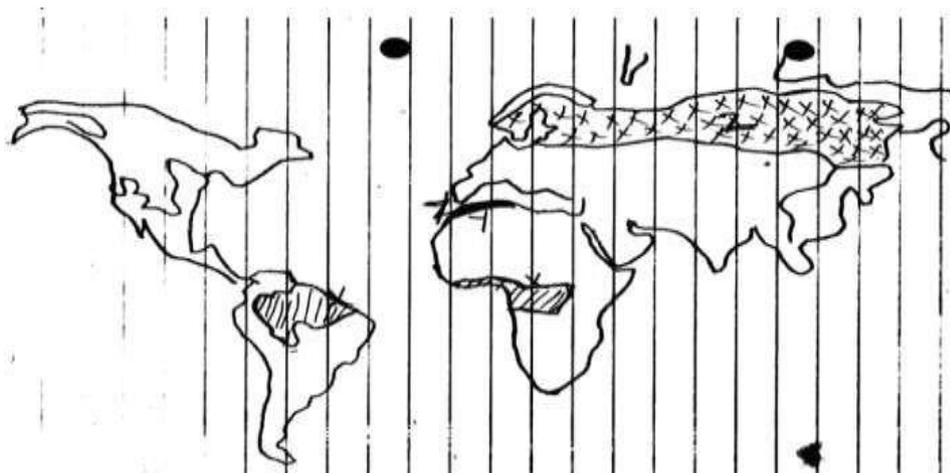
Name the forest vegetation marked x and y (2mks)

Explain four ways in which the forest vegetation marked z has adopted to climatic conditions in the area. (8mks)

b) Compare soft wood forests in Kenya and Canada under the following headings

   i. Tree harvesting (2mks)

   ii. Transportation of logs (2mks)

   iii. Distribution of softwood forests (2mks)

c)   State four environmental and ecological benefits of forests (4mks)

d)   Students from a school in mount Kenya region carried out a field study on forests around their school.

   i. Name two types of softwood trees they may have come across. (2mks)

   ii. Give two problems they may have experienced during field study (2mks)

10) List two levels of domestic trade (2mks)

   i) Name any two trading blocks in Africa (2mks)

   ii) Explain Four factors that influence trade (8mks)

   iii) Explain the significance of trade to Kenya (8mks)

   iv) State five problems facing trade in Kenya (5mks)

KAMDARA   JET   GEOGRAPHY
312/1
SECTION A

Answer all the questions in this section

1. **Give the four zones of the atmosphere.   (4mks)**
   - Troposphere
   - Stratosphere
   - Mesosphere
   - Thermosphere

2 a) **List the two types of earth movements.   (2mks)**
   - Vertical movements
   - Horizontal movements

   b) Describe how gravitate pressure causes earth movements   (3mks)
   - Large quantities of magma escape to the surface leaving large voids behind
   - Crustal rocks above the void are pulled by gravity
   - The crustal rock eventually move inwards to fill the voids below i.e. vertical movements

3 a) **Define the term Aridity.   (2mks)**
   - refers to the state of land being deficient in moisture leading to scanty vegetation

   b) Outline three factors that influence wind deposition.
   - Nature of desert surface
   - Obstacles
   - Strength and direction of wind
   - Variation in weather conditions
   - Amount of load carried

4 a) **Differentiate between ice caps and ice bergs   (2mks)**
   - Ice caps are smaller permanent ice sheets which cover limited areas of plateaus or high mountain tops
   - Iceberg is a mass of ice floating on the sea that has broken off from an ice sheet

   b) List three ways through which ice moves.   (3mks)
   - Plastic flowage
   - Basal slip
   - Extrusion flow

5 a) **Name two types of tides.   (2mks)**
   - Spring tides
   - Neap tides
   - Perigian tides
   - Apogean tides

   b) Explain two ways through which the sea acquires its load.(4mks)
   - materials brought in by rivers and wind
   - materials that are products of mass wasting along the coast
   - products of erosion and weathering along the coast
   - Volcanic debris resulting from volcanic eruptions in the sea or on the land bordering the sea.

   SECTION B

   Answer question 6 and any other two questions from this section.

6 Study the map of Migwani(1:50,000) sheet 151/1 provided and answer the following questions.
   Convert the scale of the map to statement scale   (1mk)
   1/50000
   100000 cm- 1km

geography

50,000 cm- 50000/100000x1 =0.5km

As statement 1 cm rep 0.5 km

What is the approximate latitudinal and longitudinal position of Ikoo school and shops. (2mks)

1 10‛‛S 38 10‛‛E

i. What is the six figure Grid Reference of Kisini dam to the North East.(2mks)

075777(+,- 1) **ii. What is the height of**

Kyoomi hill.(2mks)

1360 -1380 meters

iii. **Name two man-made features found East of Easting 00 and North of Northing 80.** (2mks)

☐ Dry weather road
☐ Settlements

(b)
    i. **Draw a rectangle from 0563-1363 and from 0570-1370(2mks)**
    ii. **On the rectangle mark and name the following**

☐ .steep slopes
☐ .Mutitu trading center
☐ .Main river
☐ .Road E728

A Rectangle from Grid Reference 0563-1363 and from 0570-1370.

Total 6 marks
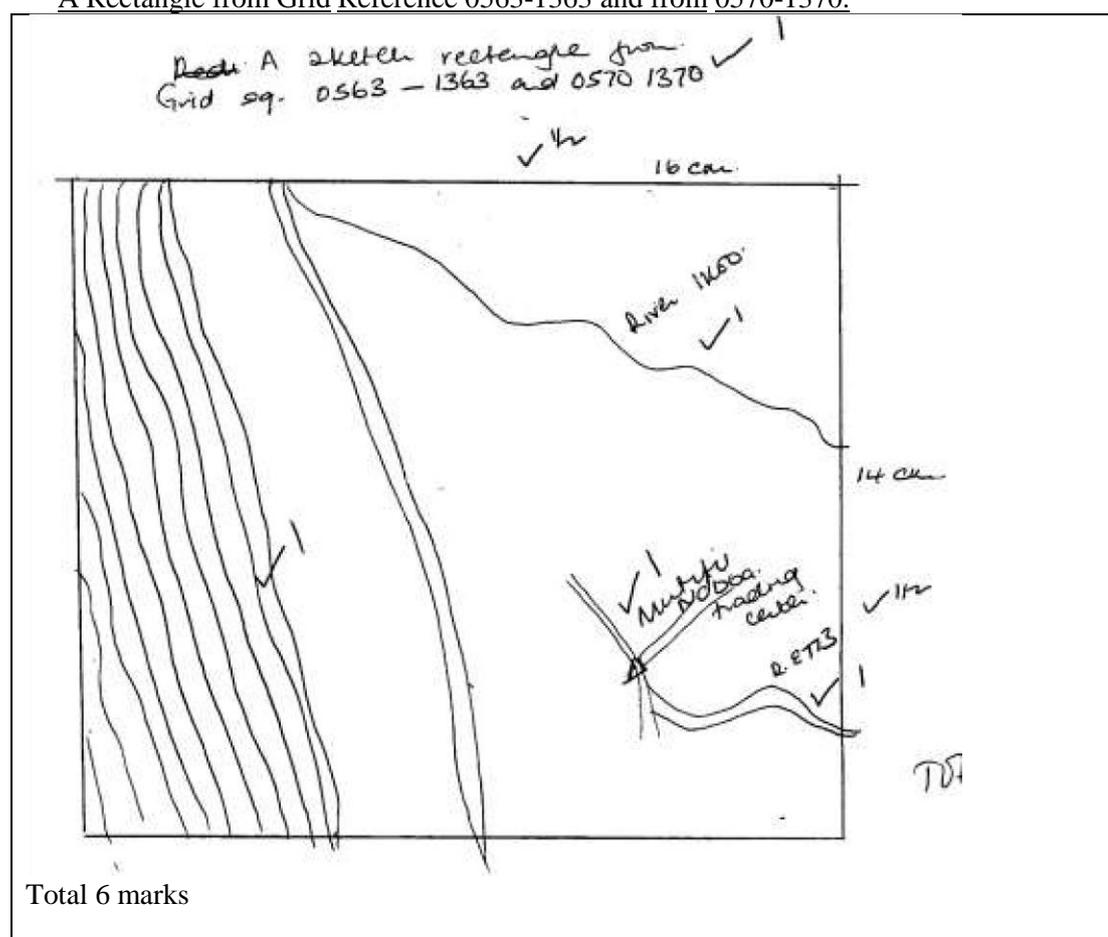
Rect -1mk, title-1mk, features 1mk each, total mks 6mks for question 6b

6 c)Citing evidence from the map give three social services offered in the area covered by the map.(6mks)

☐ Education-Evidence by school at Mutitu
☐ Health-Evidence health centre at Mutitu Dispensary at Mui
☐ Administration-chief''s office Mutitu
☐ Religious service-church at Musengo
☐ Recreation-Rest House at Gwani

    d)Describe the drainage of the area covered by the map. (5mks)

☐ The area of Migwani has many rivers

☐

☐

☐   The rivers are permanent

☐   The rivers are flowing to the East and S/East and rise from the western part of the area ☐ The main river is river Ikoo

☐   It has alluvium deposits from G.R 0769 where the river channel widens

☐   The rivers in the N/E have formed a denditric pattern

There are several reservoirs e.g at Mboni dam and Kisini dam.

There are also springs e.g in 0663

7. a

    i. Define the term denudation.   **(2mks)**

☐ It is the destruction, wastage and removal of parts of the earth¨s surface **ii. Explain how the following factors influence weathering** Topography

☐ In steep slopes weathering process is faster because weathered material are washed away quickly exposing rock surface to more agents of weathering

☐ on gentle slopes and flat areas weathering process is slow because weathered material remain in the same area covering the rock beneath   **(2mks)**

    Rock structure

☐ Where jointing is circular a rock undergoes spheroidal weathering

☐ If the jointing forms columns of blocks in the rocks, the rock will break into castle like blocks after weathering.

    b) Describe the process of block separation in mechanical weathering.(5mks)

☐ During the day high temperatures intensely heat the rocks causing them to expand

☐ At night rapid cooling occurs as temperatures drop considerably

☐ This causes the rock to cool and contract

☐ This process of expansion and contraction is repeated daily over a long period of time

☐ With time, stress develops along the joints and cracks causing blocks of rocks to separate along the lines of weakness

    c) Explain the importance of weathering to the economy of Kenya under the following Tourism

☐ Weathered rocks like granitic tors are fascinating.They attract tourists who bring in foreign income Agriculture

☐ Weathering breaks up rock to form soil.This soil can be used for agricultural purposes d)

    i. What is mass movement.   **(2mks)**

☐ Is the downslope movement of rock material due to gravity due to gravity after such materials have been lubricated by rain water or melting snow.

  ii.Give two forms of slow mass wasting.   **(2mks)**

☐ Soil creep

☐ Talus creep

☐ Rock creep

☐ Solidification **iii.   Describe the following forms of landslides**

☐ Rock slides -downslope movement of mass of rock

                -moves down a gentle slope

                -slides down a bedding plane or fault

☐ Avalanche -It is the rapid movement of rock and ice masses down a Mt slope by gravity

☐ It can occur when partially thawed masses of enormous ice fall down the valley slopes

8   a)

  i. Name three features that form as a result of river erosion.

☐ Stream-cut valley

☐ Gorges

☐ Rapids and waterfalls

☐

☐

- Pot-holes
- Interlocking spurs **ii. Describe the following processes of river transportation**
  <u>Suspension</u>
  Light and insoluble materials like mud, silt and clay are transported downstream in the form of a mixture (2mks)
  <u>Traction</u>
  Heavy materials like boulders are pushed and rolled along the river bed by the force of water and gravity.

(2mks) b)

i. Using a well labeled diagram describe how a natural levee forms.(5mks)

- Levees are formed when a river floods
  The river deposits coarse alluvium on the banks and fine materials are carried into the floodplain
  Accumulation of coarse materials raises banks of the river forming levees.(Diag -2mks , exp 3mks) **ii.Outline**

two factors that may lead to the flooding of a river with natural levees.(2mks)

- The river- bed and channel have been elevated above the general level of the plain.
- The river channel has become narrower and shallower due to deposition of alluvium.
- They differed tributaries created by the deposition may also flood.

iii.Give two ways in which a river can improve food security in a region.　　　　(2mks)

- A river can be used to irrigate land especially in dry areas or areas of inadequate rainfall and as a result increase agricultural production,
- Rivers contain fish which is a good source of food when caught.

c) Your class is planning to carry out a field study of a river in its youthful stage.

i. Formulate 3 hypothesis for your study

- The presence of the Gorge in the river course attracts tourists to the area
- Transportation along the river is difficult because of the presence of many rapids
- The river has formed a dendritic pattern
- The river has a small load because of the presence of resistant rocks in the channel **ii. Give three reasons why it should be necessary to write a work schedule for the study.　　(3mks)**
- So as to reduce the tendency to waste time and ensure time is well managed ☐ It ensures that no important area is left out or covered inadequately ☐ It ensures that one remains on course and does notdisgress.
- It provides a basis for evaluating the field work while it is still in progress
- Helps one plan accordingly as one has a clue on the amount of time to be taken during the study.

iii. In what ways would you record the data collected from the study.　　　　(3mks)

☐ Note-taking
- Filling in questionnaires
- Photographing/video-recording
- Tabulating
- Drawing maps
- Sketching diagrams

9 a

i. Define the term rock.(2mks)

☐ A rock is a substance that is an aggregate of mineral particles.

ii. Briefly describe each of the following rocks.

<u>Igneous rocks</u>

These are rocks formed when magma cools and solidifies in the earth''s crust on reaching the surface of the earth.

<u>Sedimentary rocks</u>

These are rocks formed from the deposits of sediments or particles of other rocks which have been laid down in layers either in water or on land. **<u>Metamorphic rocks</u>**

-

-

These are rocks which have been subjected to great heat and pressure hence they have changed in appearance or character.

b)

i. Distinguish between permeable and impermeable rocks. **(2mks)**

☐ Permeable rocks allow water to pass through them while impermeable do not allow to pass through them.

ii. Describe how the following lakes formed. Lake Masinga

☐ Men built a dam across R.Tana

☐ Water accumulated on the upstream side of the barrier.

☐ This resulted in a man-made lake called Lake Masinga. (3mks)

Lake Kanyaboli

☐ The river Yala began meandering on the flood plain

☐ Intense lateral erosion took place on the concave bank

☐ On the convex bank deposition was taking place and this caused narrowing of land separating the two concave banks

☐ Eventually the two concave banks joined causing the river to take a short-cut cutting off an ox-bow lake called LakeKanyaboli (4mks)

iii) Explain two ways in which Lake Victoria influences the climatic conditions of the area

High rate of evaporation from the lake results in convectional rainfall in the region.

The presence of the lake in the area leads to high humidity due to high rate of evaporation

☐

☐

□ Areas to the lake experiences a cooling effect during the day due to the influence of the sea breeze (4mks) **c) Explain two negative effects of lakes.(4mks)]** <u>Habitat of disease vectors.</u>

Fresh water lakes provide a suitable habitat for the breeding of disease vectors e.g snails that hostbilharzia

<u>Transport barriers</u>

The presence of a lake can be an obstacle to land transport making roads wind round such barriers

<u>Flooding</u>

Lakes can overflow when excessive rain is received that the depression cannot contain.

10 (a)

i. Name three surface features in limestone areas.(3mks)

□ Grikes and clints

□ Swallow-holes

□ Dry valleys

□ Dolines

□ Uvala

□ Polyje

□ Gorges

ii. Differentiate stalactites from stalagmites. (2mks)

Stalactite is a column of limestone that grows from the roof of a cave downwards while stalagmite is a column of limestone that grows upwards from the floor of a cave.

iii. Explain two factors that influence formation of features in limestone areas. (4mks)

□ The surface rock and the rock beneath should be thick limestone,dolomite or chalk.The rock should be hard and well jointed

□ The climate should be hot and humid

□ Chemical method by solution is faster in region of high rainfall and high temperatures

□ The water table in the limestone rocks should be deep below the surface.This allows the rocks above to form features.

10. (b)

i. Define the term soil. (2mks)

□ Soil is the uppermost surface layer of loose and unconsolidated material which overlies the crustal rocks on which plants grow. **ii.What is meant by the following terms**

□ Soil catena-It is the arrangement of different soils down a slope(2mks)

□ Soil profile-refers to the vertical arrangement of different layers from the surface to the bedrock(2mks) **iii. Outline 3 ways through which mulching helps improve soil fertility.(3mks)**

□ It reduces evaporation of water from the soil

□ It protects the soil from erosion

□ It increases the rate of infiltration of water into the soil

c) Your class is to carry out a field study in an area of polluted soil

i.Give two objectives of your study (2mks)

□ To find out the cause of pollution

□ To investigate the effect of the pollution on agricultural activities

□ To investigate the measures being taken to control the pollution **ii.Give two negative affects you may identify that could have been caused by polluted soil**

□ It has caused drying and death of   some vegetation

□ The inhabitants suffer various ailments after consuming crops grown there.

□ Infertility of soil due to death of microorganisms (2mks) **iii.What is the likely cause of soil pollution in the area of study**

□ Chemical fertilizers

□ Industrial effluent

□ Sewage disposal

□ Oil spills

☐ Pesticides, fungicides and herbicides(3mks)

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PAPER TWO GEOG
MARKING SCHEME
312/2

1. a)   definition of agriculture   (2mks)
    Agriculture is the purposeful cultivation of crops and rearing of animals for food or   commercial purposes. b)
    Three characteristics of plantation farming

☐ It requires large amounts of capital to establish

☐ Heavy use of machinery

☐ Scientific management

☐ One type of crop is grown   (1x3)

2   a) two minerals inKenya mined through open cast mining method
(2mks)

☐ Limestone

☐ Diatomite

☐ flourspar

    b) State three environmental problems of open cast mining   (3mks)

☐ leads to dereliction of land due to dumping of waste material/destroys the beauty of land Leads to noise/
   air/water pollution

☐ Displaces human settlement hence disrupting peoples lifestyle/high cost of resettling

☐ Dumping of wastes destroys natural vegetation/encourages loss of biodiversity

3) Give two types energy produced using water .   (2mks)

☐ Hydro electric power ☐ Wave energy.

☐ Tidal energy,

c) State three problems facing energy management and conservation.   (3mks)

☐ Illegal logging as people are still destroying forests

☐ Failure to hold aggressive campaigns for the use of other sources of energy like solar .

☐ There is still little knowledge on methods and means of energy conservation.

☐ Poverty has also contributed to energy management problems as many people use wood fuel as cheapest option.

☐ In rural areas, wood fuel is the most known source of energy.

4   a) what is crude birth rate? (2mks)
    This is the annual number of birth per every thousand people of the total population b)
    Give three effects of rural to urban migration

☐ Leads to overpopulation and overcrowding hence establish of slums caused by imbalance and the number of
   people seeking employment

☐ Unemployment n t

☐ High demand for social amenities resulting in congestion in schools, hospitals,housing.e.t.c

☐ High population leads to food shortage

☐ Large number of poor people lead to social evils like crime, prostitution e.t.c

5. a) Distinguish between extractive and manufacturing industries   (2mks)

☐ Extructive industries involves the processing of raw material

☐ Manufacturing industries involves processing of raw materials into better forms of products
    b) Give three reasons why the pulp and paper industry is located in Webuye   (3mks)

☐ The industry need a lot of water for cleaning hence presence of river nzoia

- It is readily accessible to an area where raw materials(forests) are grown e.g. kaptagat, kipkabus
- Due to well-developed transport net work,ksm-uganda road
- Availability of labour from the dense populated areas of Bungoma,kakamega

6 comparative bar graph for road, air and railway transport in Kenya between 2006-2009
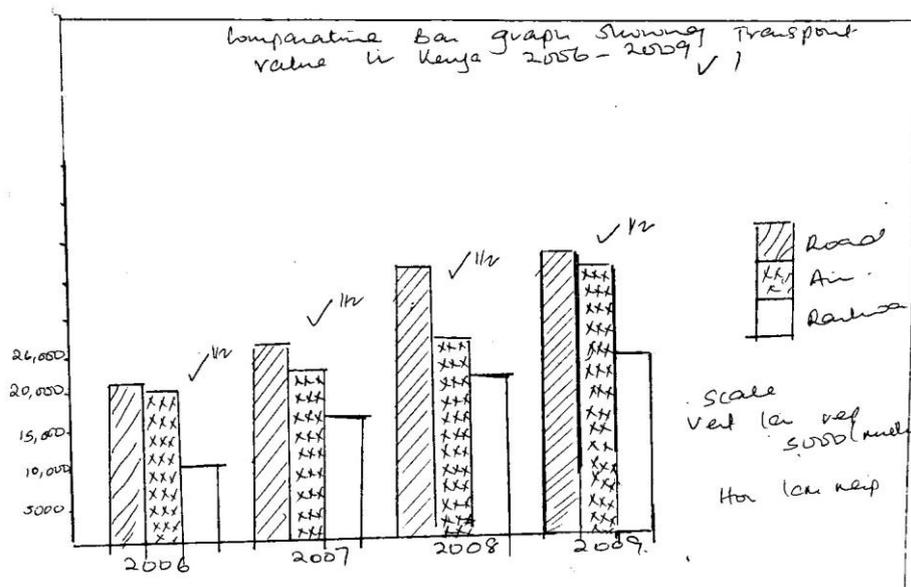
a) i)

- There is increase in the use of modes of transport btwn 2006 to 2009.
- The commonly used mode of transport is road.
- The least used is rail transport ii)   Advantage of Comparative bar graph
- They are easy to compare
- They are easy to interpret
- They give good visual impression   (3x4)
    b) Calculate the total transport for the year 2008   (2mks)
      85830
a. Means of communication
-        Mobile telephones
-        The internet
-        Television
-        Radio
-        Films and videos
-        E-mail services
-        Posters
    b. Challenges facing Internet services

- □ The bigger population is not computer literate
- □ It is expensive to install
- □ Fluctuation of network services
- □ Not available in some types of phones
- □ Mainly based in urban areas
- □ It requires electricity which is not available in some parts of the country

(2x3) c. Advantages of water transport

- □ It is cheap and cost effective
- □ It is best for transportation of special goods
- □ It experiences no delays/Congestion on the waterways
- □ It is cheap to transport bulky goods and its suitable Not available)

7) Explain three ways in which man influences distribution of wild life (6mks)

- □ Growth of human population man has encroached/ cleared forests for various activities resulting in the decline of rare species of wild game.
- □ Government policies such as enacting laws ,creation of animal orphanage, game parks and game reserves has helped to protect wildlife from poachers
- □ Poaching and game hunting has led to the decline and placed rare species of animals under danger of extinction.
- □ Human wildlife conflict around packs has reduced the number of wildlife.

  b) Explain five benefits Kenya derives from tourism (10mkS)

- □ Due to the growth of human population man has encroached/ cleared forests for various activities resulting in the decline of rare species of wild game.
- □ Government policies such as enacting laws ,creation of animal orphanage, game parks and game reserves has helped to protect wildlife from poachers
- □ Poaching and game hunting has led to the decline and placed rare species of animals under danger of extinction.
- □ Human wildlife conflict around packs has reduced the number of wildlife.
- □ Development of tourist facilities provide employment opportunities, Thus reducing unemployment and raises people standard of living
- □ Tourist pay for the variety of services offered from which Kenya gain foreign exchange □ Tourists provide ready market for trade items such as handicrafts and curios.
- □ The need for more agricultural products for tourists in hotels and lodges has stimulated the growth of agriculture and other related industries .
- □ The need for improved transport and communication has led to the promotion of infrastructure to tourist sites which also benefits local people.
- □ Establishment of national parks and museums as tourist attractions has enabled Kenya to protect/ preserve its cultural heritage.
- □ Tourism encourages cultural exchange which promotes international understanding.

  C) State three Measures Kenya needs to in order to attract more tourists in the country. (4mks)

□ Improve infrastructure such as roads, airports, to all tourist attraction sites so as to make them accessible.

- □ Improve security to ensure safety of tourists.
- □ Market the country aggressively to improve her image abroad.
- □ Establish tourist attractions in areas with high potential.
- □ Improve recreational facilities such as hotels
- □ Intensify domestic tourism to avoid overreliance on foreign tourists

  ii) Give two reasons why they needed a map (2mks)

- □ To be able to locate the tourist attraction areas
- □ To find their way to various sites
- □ To avoid dangerous places

8   a) i) state two by products produced when sugarcane is processed
(2mks)

- ☐ Molasses
- ☐ Fodder
- ☐ Fuel
- ☐ Jaggery   (2x1) ii)

  Three districts in Kenya where sugarcane is grown commercially
- ☐ Kisumu
- ☐ Busia
- ☐ Kakamega
- ☐ Kwale   (3x1) b)

  Conditions necessary for growing of cane Physical
- ☐ Gently sloping land for easy mechanization.
- ☐ Deeps oils rich in nutrients and well drained.
- ☐ High rainfall all year round (1200-1500mm).
- ☐ High temperatures between 21 and 27 degrees Celsius, throughout the year. Human
- ☐ A large supply of labor for planting, weeding and harvesting.
- ☐ Well-developed transport network so that cane reaches the factory quickly.
- ☐ Capital for growing cane and setting up factories.

  iii) Why Kenya faces Sugar shortages yet she is a major producer of the same
- ☐ Sugarcane relies on natural rain so when it fails, drought destroys the crop reducing sugar processing
- ☐ Mismanagement of cane factories demoralizes farmers
- ☐ Greedy merchants smuggle sugar out of the country.   (2x2) iv)

  Four ways in which Kenya benefits from sugarcane growing.
- ☐ Provides framers with stead income, raising standards of living.
- ☐ Creates employment in the farms and factories to many people.
- ☐ Facilitated development of infrastructure in cane growing areas.
- ☐ Provide sugar locally thus saving foreign exchange ☐ creation of social amenities like hospitals and schools

9   a) i) Name the forest vegetation marked „X‟ and „Y‟.

          X-------Tropical rain forest
          Y-------Mediterranean forest.

    ii) Explain four ways in which the forest vegetation marked „Z‟ has adapted to the climatic conditions
       of the area.
- ☐ The needle- like leaves help to reduce the loss of water from the trees in winter when there is no moisture to be absorbed from the soil.
- ☐ The wide shallow roots enable trees to tap water from the top soil as the subsoil is frozen .
- ☐ Most of the trees are evergreen so as to have maximum utilization of sunlight during the short growing season.
- ☐ Tree trunks are flexible to enable them sway without breaking during the strong winds.
- ☐ The trees have conical shape and flexible branches which allows snow to slide easily/ and to minimize damage to the trees.
- ☐ The leaves have a tough waxy skin which protects them from winter cold.

      b)   Give differences in soft wood forests in Kenya and Canada under the following headings.
          i) Tree harvesting.   (2mks)
- ☐ In Kenya workers are transported daily to logging sites since there are no camps for workers close to the forests. In Cannada logging involves setting up settlement for workers within the region.
- ☐ Power saws and axes are used in both countries to harvest trees.
- ☐ In Kenya there is indiscriminate logging and Cannada harvesting is done on mature trees one block after another.

                                                                                              (2x1)   ii)

Transportation of logs

☐ Transportation of logs in Kenya is by road on tractors and lorries, while in Cannada logs are transported by floating in river water ,and also by skidding on frozen waters.

☐ In Kenya harvesting is done throughout the year while in Cannada harvesting is done in winter and spring.

(2x1)   iii)

Distribution of soft wood forests

☐ In Kenya, soft wood forests are mainly found in the central and western highlands, while in Cannada 70% of the country is covered by forests.

☐ In Kenya most of the soft wood trees have been cleared, In Cannada most of the soft wood trees are natural and wide spread .   (2x1)

c)   State four environmental and ecological benefits of forests.
(4mks).

☐ Forests protect watersheds.

☐ Forests modifies climate.

☐ Forests check on soil erosion and flooding.

☐ Forest vegetation regulates co2 in the atmosphere.

☐ Forests conserve Biodiversity and maintain ecological balance.

☐ Forests make the environment beautiful.

d)   ) Students from a school in mt Kenya region carried out afield study on forests around their school.   i) Name two types of soft wood trees they may have come across .
(2mks) ☐ Juniper (Kenyaceder). ☐ Podo ☐ Pine. ☐ Cypress.

ii) Give two problems they may have experienced during the field study   (2mks)

☐ Poor weather conditions such as rain and low temperatures might have interfered with movement.

☐ Students might have lost their way in the forest.

☐ Encounter with wild animals.

☐ Steep and rugged terrain slowed down movement.

10 a) Levels of Domestic trade

☐ Retail trade

☐ Wholesale trade   (2mks) b. Two trading blocks in Africa (2mks)

☐ Common market for eastern and southern Africa (COMESA)

☐ The southern African development community(SADC)

☐ The economic community of west African states(ECOWAS)

c) Factors that Influence trade

☐ Difference in natural resources

☐ Goods means transport

☐ Security

☐ The existence of aids to trade like banks, Insurance, Warehousing.

☐ Good political relations

☐ Different level of technology

☐ Capital

☐ Trade restrictions in form of tariffs, quotas and bans

i. Significance of trade in Kenya

☐ It has stimulated industrial development as it provides both internal and external markets for products

☐ It enables Kenya to earn foreign exchange through exportation of products

☐ The country earns revenue from duties and taxes levied on goods and services

☐ Development of roads because trade requires efficient means of transport and communication.

- Creation of job opportunities such as clearing and forwarding agents and officials
- It has led to development of Urban centers
- To facilitate specialization hence more earnings in foreign exchange
- Enhances peace and stability
  a) Problems facing Trade in Kenya
- Inadequate transport and communication facilities
- Smuggling of goods
- Imposition of trade restrictions
- Fluctuation of prices of goods in world market
- Inadequate capital
- Insecurity
- High license fees charged on trades in order for them to establish their businesses.   (5x1)

GATUNDU NORTH SUB-COUNTY JOINT EXAMINATIONS
KENYA CERTIFICATE OF SECONDARY EDUCATION
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GEOGRAPHY 312/1
PAPER 1

SECTION A (25 MARKS)
Answer all questions in this section.

1. (a) Name any **three** forms of mass wasting. *(3mks)* (b) State two ways in which downwash occurs. *(2mks)*

2. (a) The diagram below represents a coastal landform.
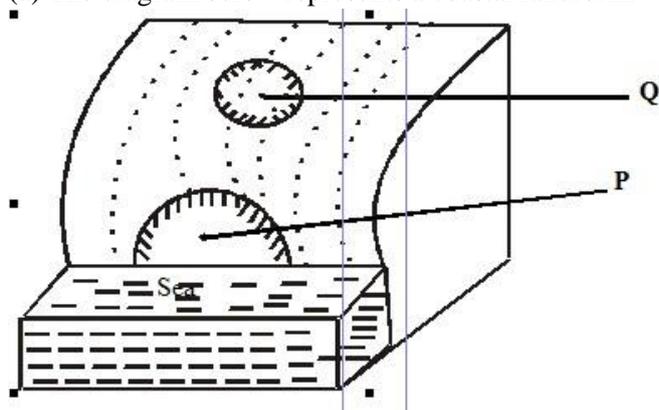
Name the features marked **P** and **Q**. *(2mk)*

   (b) State three ways in which coral rocks contributes to the economic development of Kenya. *(3mks)*

3. (a) State two conditions necessary for the development of Karst landscape. *(2mks)* (b) Give three reasons why there are few settlements on a Karst landscape. *(2mks)*

4. (a) Differentiate between secondary vegetation and planted vegetation. *(2mks)*
   (b) State three characteristics of Mediterranean type of vegetation. *(3mks)*

5. (a) What is an air mass? *(2mks)*
   (b) Name three main air masses found on the earth''s surface. *(3mks)* **SECTION B**

Answer question six and any other two questions from this section.

6. (a) Study the map of Migwani 1:50000 (sheet 151/1) provided and answer the following questions.
   (i) Convert the representative fraction of the map extract into a statement scale. *(2mks)*
   (ii) Give the six figure grid reference of Usiani school. *(2mks)*
   (iii) What is approximate height of Kyoni Hill in grid square 9481? *(2mks)*
   (b) (i) Calculate the average gradient of the dry weather road from the junction at 923789 to the drift at grid
   reference 988 797. *(2mks)*
   (ii) Interpret the gradient calculated in (bi) above. *(1mk)*
   (iii) Describe the drainage of the area covered by the map. *(3mks)*
   (c) Students from Yoonye school carried out a field study of Mutitu (Ndowa) area.
   (i) Identify two ways they may have prepared for the study. *(2mks)*
   (ii) Citing evidence from the map; state three functions of Mutitu (Ndowa) area. *(6mks)*
   (d) Identify three types of natural vegetation in the area covered by Migwani map. *(3mks)*

7. (a) (i) What is a lake. *(2mks)*
   (ii) Name two types of lakes formed through vulcanicity. *(2mks)*
   (b) Use the map of Kenya below to answer questions b(i).
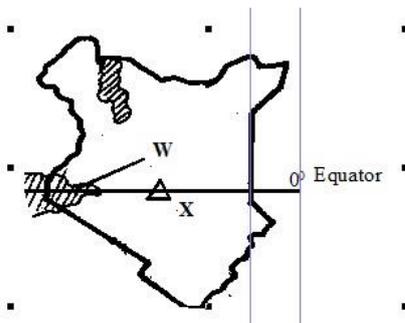
(i) Identify the lake labelled W and mountain labelled X.   *(1mk)*

(ii) Explain how the lake named in b(i) above influences the climate of the surrounding areas.   *(6mks)*

(c)   (i) State three reasons why lakes in Rift valley are salty.   *(3mks)*

(ii) Name any three fresh water lakes in Kenya which are within the Rift valley. *(3mks)*

(d)   (i) Explain four economic significance of lakes to human activities.   *(8mks)*

8.   (a) (i) Name four types of faults.   *(4mks)*

(b) (i) Stat three causes of faulting.   *(3mks)*

(ii) Using well labelled diagrams, describe the formation of Rift valley by compressional forces.   *(6mks)*   (iii) Apart from Rift valley, name three features formed through faulting.   *(3mks)*

(c) You intend to carry out a field study on faulting at the Rift valley.

(i)   Identify three sources of data you would use to prepare for the study.   *(3mks)*

(ii) State three positive effects of faulting to human economic activities you are likely to identify.   *(3mks)*

(iii) Outline any three problems you are likely to encounter during the field study. *(3mks)*

9.   (a) (i) Name three sources of underground water.

(3mks)   (ii) Explain three factors that influence the occurrence of underground water.

(6mks) (b) The diagram below shows zones of underground water. Use it to answer the question.
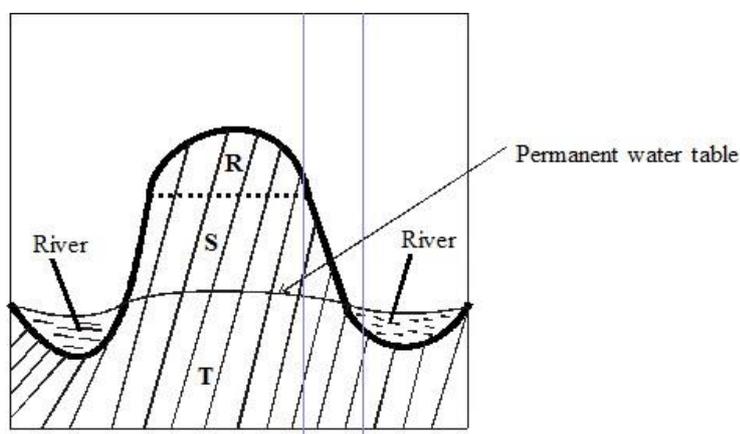
(i)   Name the zones marked R, S and T.   *(3mks)*

(ii) State four conditions necessary for the formation of an artesian well.   *(4mks)*

(iii) Explain three significance of underground water to human economic activities. *(6mks)*

(c) State three ways in which springs occur.   *(3mks)* 10.

(a) Differentiate between mass wasting and mass movement.   *(2mks)* (b)

Explain how each of the following factors influence mass wasting.

(i)   Climate   *(2mks)*

(ii) Gradient of slope   *(2mks)*

(iii) Vegetation   *(2mks)*

(c) (i) Apart from soil creep identify other two types of slow mass wasting.   *(2mks)*

(ii) State three evidences of soil creep in a given area.   *(3mks)*

(d) Explain any four positive effects of mass wasting to human economic activities. *(8mks)*

(e) State any four causes of landslides.   *(4mks)* **GATUNDU NORTH SUB-COUNTY JOINT EXAMINATIONS**

KENYA CERTIFICATE OF SECONDARY EDUCATION

312/2

GEOGRAPHY 312/2

PAPER 2

SECTION A (25 MARKS)

Answer all questions in this section.

1. (a) Apart from fresh milk, name two other dairy products.
    (2mks)
    (b) State three physical factors that favour dairy farming in the Kenyan highlands.
       (3mks)
2. (a) State three negative effects of high population growth in a country.   (3mks)
    (b) List two primary sources of population data.   (2mks)
3. (a) Name two non-agricultural industries in Thika town.   (2mks)
    (b) State three factors that have led to the development of industries in Eldoret town.   (3mks)
4. (a) What are fisheries?   (2mks)
    (b) Name three types of fish species found in lake Victoria.   (3mks)
5. (a) Give two reasons why it is necessary to conserve water.   (2mks)
    (b) Identify three ways through which water is polluted.   (3mks)

SECTION B

Answer question 6 and any other two questions from this section.

6. The data below represents sugarcane production in five major factories in Kenya.   Use it to answer questions a(i).

Factory	Production in "000" tonnes
Sony	50
Nzoia	100
Chemelil	200
Muhoroni	250
Mumias	400

   (a) (i) Using the data above, draw a divided rectangle measuring 15cm in length.
(7mks)
        (ii) Give the difference in tonnage produced by Muhoroni and Nzoia companies.
           (1mk)
        (iii) State two advantages of representing data using divided rectangles.   (2mks)
   (b) Explain four physical conditions required for the growing of sugarcane successfully in Kenya.
       (8mks)
   (d) (i) State three uses of sugar.   (3mks)
        (ii) State four benefits of sugarcane growing to the Kenyan economy.
           (4mks)
7. (a) (i) Give two reasons why Kenya experiences unfavourable balance of trade.   (2mks)
     (ii) State four ways through which the government of Kenya is promoting export trade.   (4mks)
    (b) Explain four factors that influence trade.   (8mks)
    (c) State five objectives for establishing the common market for Eastern and Southern African.   (5mks)
    (d) Explain three benefits that Kenya derives from international trade.   (6mks)
8. (a) (i) What is domestic tourism?
    (2mks)
     (ii) Explain four factors which hinder the development of domestic tourism in Kenya.   (8mks)
    (b) (i) State three reasons why domestic tourism should be encouraged in Kenya.
       (5mks)
        (ii) Give two effects of forests fires on wildlife in Kenya.
           (2mks)
    (d) (i) Explain three factors which have made Switzerland a major tourist destination in Europe.   (6mks)

(ii) Other than establishing national parks, explain two measures being taken by the government of Kenya to conserve wildlife.   (4mks) 9. (a) (i) What is forestry?   (1mk)

  (ii) State three characteristics of natural forests.   (3mks)

(b) (i) Describe how the following factors influence the distribution of natural forests.

  (i) Soils   (3mks)

  (ii) Human activities
     (3mks)

  (iii) Altitude   (3mks) (ii) Explain three importances of forests and forest products.   (3mks)

(c) You intend to carry out a field study on a nearby forest.

  (i) Give two reasons why you need to prepare a route map.   (2mks)

  (ii) Identify any two problems you are likely to encounter while carrying out the field study.   (2mks)

10. (a) (i) Differentiate between a two-way road and a one-way road system in Kenya.   (2mks)

  (ii) Explain four causes of road accidents on the Kenyan roads.   (8mks)

(b) (i) The map below shows the proposed Trans-African railway and the Great North road.
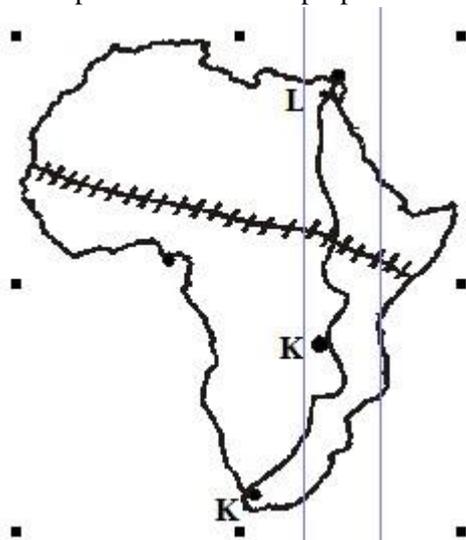
  (i) Name the towns marked J, K and L on Great North road.   (3mks)

  (ii) Name three countries where the Trans-African railway line is not completed.   (3mks)

(c) (i) Give five reasons why the railway transport is not well developed in Africa?   (5mks)

  (ii) Explain the contribution of St. Lawrence Seaway to the development around the great lakes. (4mks)

GATUNDU NORTH SUB-COUNTY JOINT EXAMINATIONS
FORM FOUR
JULY/ AUG 2015
GEOGRAPHY
 312/1
MARKING SCHEME PAPER 1

1. *(a) Forms of mass wasting*
☐   Soil creep
☐   Rock of creep
☐   Talus creep
☐   Solifucation   *(Any 3 x 1 = 3mks)*
        (b) Forms of downwash
☐   Sheet wash
☐   Gullying   *(Any 2 x 1 = 2mks)*

2. *(a) Features marked P and Q*
P - cave
Q - blow hole
        (b) How coral rocks contributes to the development of Kenya
☐   Coral features attract tourists who bring foreign exchange
☐   Lagoons enclosed by coral reefs provide breeding grounds for fish which promotes development of fishing
industry.
☐   Coral rocks is used as raw materials for making cement.
☐   Coral rocks are used as building stones for houses.
☐   Some coral stones are used as ornaments.   *(Any 3 x 1 = 3mks)*

3(a) *Conditions necessary for development of Karst landscape*
☐   Surface rocks and rocks beneath the surface should be thick, limestone, dolomite or chalk ☐ The rock should
be well jointed ☐ The climate should be warm or hot ☐ Rainfall should be moderate to high.
☐   The water table in the rocks should be deep below the surface.   *(Any 2 x 1 = 2mks)*   **(b)**
Reasons why there are few settlement on a Karst landscape ☐ The surface is not conducive to settlement because it
is rocky.
☐   The surface in most places has thin soils which would not encourage agriculture.
☐   The vegetation in most places is poor and would not support livestock rearing.
☐   Karst landscapes experiences inadequate water supply both on the surface and underground.
☐   The surface is rugged, thus hindering construction of transport lines.   *(Any 3 x 1 = 3mks)*

4. *(a) Differentiate between secondary vegetation and planted vegetation*
☐   Secondary vegetation is the plants growing naturally in a place but has been interfered with by people while
    planted vegetation comprises plants which were grown in a place by people. *(Any 2 x 1 = 2mks)*
        (b) Characteristics of Mediterranean vegetation
☐   The vegetation is adopted to the long, hot and dry summers.
☐   Some plants are evergreen.
☐   Grasses dry up during summer and germinate during winter.
☐   Shrubs, thickets, bush and thorn bush and maquis are common.
☐   Woody scrub is common in very dry areas
☐   Some plants have small, springy leaves while others have thick-skinned leathering leaves.
☐   Some plants have deep roots.
☐   Some plans have thick barks.
☐   Some plants have large and fleshy bulbous roots.
☐   Some plants have fleshy leaves while other have skinny waxy leaves.

- Some trees are deciduous. *(Any 2 x 1 = 2mks)*

5. (a) What is air mass?

- An airmass is relatively homogeneous body of air sometimes extending over hundreds of kilometers. It originates from a specific region and has specific characteristics of temperature and humidity. *(Any 2 x 1 = 2mks)*

(b) Three main air masses found on the earth's surface.

- The equatorial air mass
- Tropical air mass
- The polar air mass
- The Artic air mass
- The Antarctic air mass. *(Any 3 x 1 = 3mks)*

6. (a) (i) Conversion ratio scale

1:50,000
1cm rep 50,000cm
100000cm rep 1km

50,000cm $\underline{50000}$ x 1 = 1/2km.
$\qquad$ 10000

So 1cm rep 1/2km.

(ii) Six figure grid reference at Usiani.

(iii) Height point of Kyoni Hill.

- Any height between 1361 - 1379

(b) (i) Average of gradient of weather road from the junction.

Gradient = $\underline{\text{vertical rise}}$
$\qquad$ horizontal equivalent
Vertical rise = 126cm - 1100m = 360m
Horizontal equivalent = 9.2km (distance of road)
$\qquad$ G = 360m
$\qquad$ 9.2km

$\qquad$ G = 360m $\qquad$ = $\underline{360m}$ $\qquad$ = 1/25.05
$\qquad$ 9.2 x 100m $\quad$ 9200
$\qquad$ 25.05 *(Any 4 x 1 = 4mks)*

Gradient is 1/25.05

(ii) Interpret the gradient calculated

- For every 25.05m the road covers horizontally, the ground rises by 1m. *(Any 1 x 1 = 1mk)* **(iii)**

Drainage of the area.

- The main drainage feature is the rivers
- The main river is IKOO
- There are reservoirs human made lakes e.g at grid square 9062 ☐ Rivers mainly flow from NW, to SE directions.
- Some rivers e.g IKOO are permanent while others are seasonal.
- River IKOO and its tributaries form dendritic drainage pattern. *(Any 1 x 1 = 1mk)* **(c)**

(i) Preparations for the study. ☐ Read books about the area

- Formulate objectives and hypothesis
- Prepare a working schedule ☐ Prepare equipment"s to carry
- Go for a reconnaissance
- Ask for permission. *(Any 2 x 1 = 2mks)*

(ii) Functions of Mutito Town

- Educational centre evidenced by the presence of school where the students got to learn.
- A medical centre evidenced by the presence of a health centre where people around go to seek for treatment.

☐ A transport and communication centre evidenced by presence of roads used to transport goods and people, as well as P.office for communication through letters.

☐ Administration function - presence of chief's camp.

(Any other relevant point, with evidence and explanation 6 x 1 = 6mks)

7. *(a) (i) What is a lake?*

☐ Large mass of water in a depression. *(Any 2 x 1 = 2mks)*

(ii) Two types of lakes formed through vulcanicity

☐ Crater lakes/caldera lakes

☐ Lava dammed lakes *(2 x 1 =2mks)*

(b) *(i) Label laked marked W and mountain marked X.*

☐ Lake Victoria

☐ Mt. Kenya *(Any 1 x 1 = 1mk)*

(ii) How lake Victoria influences climate of the surrounding area.

☐ Lake Victoria modifies the climate of the surrounding area due to heavy convectional rainfall received.

☐ Lake Victoria causes cooling effect on the surrounding area through Lake Breeze.

☐ Convectional rainfall experienced around the lake is occasionally accompanied by thunderstorms.

☐ Land breeze and sea breeze are due to low and high pressure systems.

☐ High humidity

☐ Thick cloud cover *(Any 3 x 2 = 6mk)(Accept any other relevant answers)*

(c) *(i) Why lakes in Rift valley are salty* ☐ Some lakes lack outlets.

☐ Rocks over which lake water is contour may contain minerals salt ☐ Some lakes lack enough fresh water rivers to pour into them.

☐ Surface run-off and rivers may dissolve alot of salt from rocks on which they flow. *(Any 3 x 1 = 3mks)* *(ii) Three fresh water lakes in Kenyan Rift valley*

☐ Lake Naivasha

☐ Lake Baringo

☐ Lake Turkana *(Any 3 x 1 = 3mks)*

(d) *(i) Economic significance of lakes to human activities* ☐ Some lakes provide water for domestic and industrial uses.

☐ Some lakes form tourist attraction sites thus earning the country foreign exchange.

☐ Some lakes provide building materials e.g. sand for construction of houses.

☐ Some lakes provide water for irrigation thus enhances agriculture.

☐ Some lakes are transport routes for water transport.

☐ -Some lakes are sources of minerals e.g magadi, trona which is exploited.

☐ Human made lakes provide water for HEP generation.

☐ Some lakes are source of fish which provides food. *(Any 4 x 2 = 8mks)*

(Accept any other relevant answer)

8. *(a) (i) Types of faults*

☐ Normal faults

☐ Thrust faults

☐ Anticlinal faults

☐ Shear/tear fault

☐ Reverse fault *(Any 4 x 1 = 4mks)*

(ii) *Causes of faulting*

- Tensional forces - causes rocks to stretch finally breaking them.
- Compressional forces - causes rocks to fold and some sections of folded rocks may fracture
- Shear forces - causes rocks to move along a line of weakness in opposite directions. *(Any 3 x 1 = 3mks)*

(iii) Formation of Rift valley by compressional forces ☐ Layers of rocks are subjected to compressional forces.

- Intense compressional forces causes lines of weakness to develop leading to the formation of reverse faults.
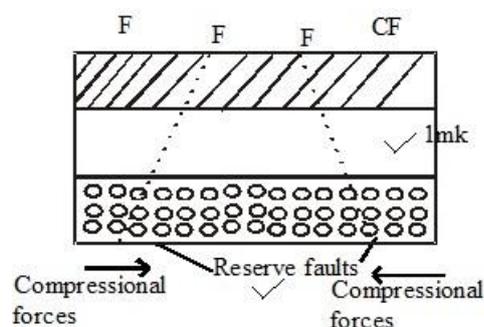
- Further compression pushes the enter side blocks over the middle block.
- Middle block may either remain static or sink slightly to form the floor of the Rift valley.
- The overhanging parts eventually collapse and are eroded.
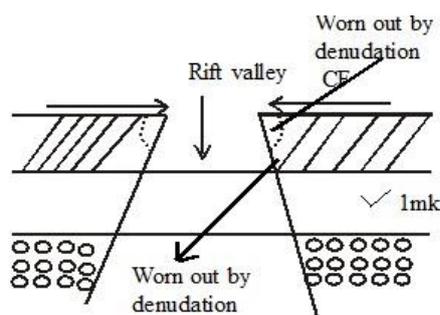
   (diagram 2 x 1 = 2mks)   (text 4 x 1 = 4mks)

(iii) Other features resulting from faulting.
- Escarpments/Fault scarps
- Tilt blocks
- Fault blocks
- Depressions   *(Any 3 x 1 = 3mks)*

(c) (i) Sources of data
- Topographical map of the area
- Textbooks
- Photographs
- Recorded video clips
- Internet   *(Any 3 x 1 = 3mks)*

(ii) *Positive effects of faulting*
- Lakes formed from faulting provide water used for domestic purposes, irrigation/ industry etc.
- Scarp springs may be formed when fault scarps expose underground water.
- Faulting features e.g. Rift valley may attract tourists hence earning foreign exchange e.g Rift valley ☐ Valuable minerals e.g. diatomite may have been exposed due to faulting thus making mining easy.
- Heavy rainfall received on the windward side of block mountains support agriculture.
                                                         (Any 3 x 1 = 3mks)

(iii) Problems likely to be encountered

- ☐   Inaccessibility of some areas due to steep slopes
- ☐   Attack from wild animals
- ☐   Sudden change in weather e.g. may start raining.
- ☐   Uncooperative resource persons.
- ☐   Language barrier with local community.   *(Any 3 x 1 = 3mks)*

9   *(a) (i) Sources of underground water*

- ☐ Precipitation
- ☐ Magmatic water
- ☐ Seas/oceans/lakes   *(Any 3 x 1 = 3mks)*

    (ii) *Factors influencing occurrence of underground water*

- ☐ Precipitation and evaporation levels - high precipitation and low evaporation will make more water enter the ground.
- ☐ Porosity of rocks - rocks with large spaces like gravel will allow more water to percolate.
- ☐ Slope - gentle slopes have high percolation rate while steep slopes don‟t allow much percolation due to run-off.
- ☐ Vegetation cover - presence of irrigation allows more percolation because water is held by the vegetation for more time.
- ☐ Levels of saturation - less saturated grounds will allow more water to percolate compare to saturated grounds.

                                                        (Any 3 x 2 = 6mks)

    (b) (i) Zones of underground water

- ☐ A - zones of intermittent saturation
- ☐ B - zone of permanent saturation
- ☐ C - zone of non saturation   *(Any 3 x 1 = 3mks)*

    (ii) *Conditions for location of artesian well*

- ☐ This stratum of rocks forms a shallow syncline with one or both ends are exposed to allow rain water to percolate.
- ☐ Permeale layer must be intertwined between two impermeable layers.
- ☐ Water should have enough pressure to come out

    (c) Ways in which springs occur

- ☐ Where permeable rock lie on top of impermeable rock on a hillside.
- ☐ At the foot of a steep scarp slope.
- ☐ When there is a well jointed limestone.   *(Any 3 x 1 = 3mks)*

10. *(a) Distinction of mass movement and mass wasting*

- ☐ Mass wasting is the movement of weathered materials down the slope under influence of gravity.
- ☐ Mass movement is the movement of weathered materials down the slope after being lubricated by rain water or snow melt.

    (b) *Factors influencing mass wasting*

- ☐ Climate - rain water lubricates the ground making the materials to move easily.
- ☐ Slope - angle of slope determines speed and nature of movement. There is faster movement of materials on steep slopes compared to gentle slopes where rate is of low movement
- ☐ Vegetation - mass movement is faster on bare surfaces than ones covered and held together by vegetation.

                                                         (Any 3 x 2 = 6mks)

    (c) *(i) Types of slow mass wasting*

- ☐ Scree creep (Talus creeo)
- ☐ Solifluction   *(Any 2 x 1 = 2mks)*

    (ii) Evidence of soil creep

- ☐ Moulds of soil behind walls
- ☐ Tilted fences
- ☐ Bending of tree trunks
- ☐ Tilted telegraph poles   *(Any 3 x 1 = 3mks)*

(d) *Positive effects of mass wasting*

☐ Tourist attraction - some features Talus/Sceneries are tourist attraction sites and tourism brings foreign exchange (revenue) into our country

☐ Creation of lakes - mounds of debris or blocks of rocks have dammed river courses creating temporary lakes which provide use for domestic/industrial use.

☐ Soil fertility - leads to deposition of fertile soils e.g. alluvial which favor agriculture destinations forming rich agricultural bases in those areas.

☐ Research centers - areas affected by mass wasting have become centers of research and study on the dynamics of terrestrial stability. *(Any 4 x 2 = 8mks)*

(e) *Causes of landslides*

☐ Earthquakes trigger landslides

☐ Heavy rainfall that lubricates materials causes it to move down slope rapidly.

☐ Deep undercutting of the base of a hill by river a river until overlying rocks slide downhill.

☐ Very steep slopes that increase effectiveness of gravity. *(Any 4 x 1 = 4mks)* **GATUNDU NORTH SUB-COUNTY JOINT EXAMINATIONS**
FORM FOUR JULY/AUG 2015
GEOGRAPHY
312/2
MARKING SCHEME

PAPER 2

1. (a) List of dairy products

☐ Cheese

☐ Butter

☐ Yoghurt

☐ Ghee

☐ Powdered milk (Any 2 x 1 = 2mks)

(b) Factors favouring dairy farming in Kenyan

highlands ☐ Low temp of about 18^0c ideal for survival of exotic breeds.

☐ Plenty of nutritious grass in the highlands.

☐ Fertile volcanic soils which ensure growth of quality grass all through.

☐ Heavy rainfall of about 1000mm which ensure growth of pasture/drinking water.

☐ High population that provides ready market.

☐ Many permanent rivers which are sources of water for dairy cattle. (Any 3 x 1 = 3mks)

2. (a) Negative effects of high population growth. ☐ High rate of unemployment ☐ Increased crime rates.

☐ Land fragmentation making land use uneconomical.

☐ Congestion in towns or traffic jams.

☐ Scramble for few available resources leading to community fights.

☐ Strain on social amenities e.g hospital. (Any 3 x 1 = 3mks)

(b) Primary sources of population data

☐ Census

☐ Sample surveys

☐ Vital registration of births and deaths (Any 2 x 1 = 2mks)

3.(a) Non agricultural industries in Thika.

☐ Leather tanning

☐ Textile industries

☐ Tobacco processing (Any 2 x 1 = 2mks)

(b) Factors that led to development of industries in Eldoret town.

☐ Availability of labour from surrounding population. ☐ Availability of agricultural raw materials ☐ Availability of power.

☐ Availability of land for expansion

☐ Availability of transport links with other partsof the country. (Any 3 x 1 = 3mks) 4. (a) Fisheries

☐ Water bodies that contain fish and other related resources. (Any 2 x = 2mks)
(b) Types of fish found in lake Victoria

☐ Tilapia

☐ Nile perch

☐ Dagaa

5.(a) Reasons for conserving water

☐ Ensure that there is supply of water for present and future generation.

☐ To maintain hydrological cycle. (Any 2 x 1 = 2mks)
(b) Ways water is polluted

☐ Discharge of industrial waste into water bodies.

☐ Dispersal of domestic waste into water bodies.

☐ Discharge of agricultural chemicals into water bodies.

☐ Natural causes e.g soil erosion.

☐ Abuse of water bodies by humans. (Any 3 x 1 = 3mks) SECTION B

6. (a)(i) Total tonnage = 1000 (000) tonnes

Sony
$\frac{50}{1000}$ x 15 = 0.75cm

Nzoia
$\frac{100}{1000}$ x 15 = 1.5cm

Chemelil
$\frac{200}{1000}$ x 15 = 3cm

Muhoroni $\frac{250}{1000}$ x 15 = 3.75cm

Mumias $\frac{400}{1000}$ x 15 = 6cm
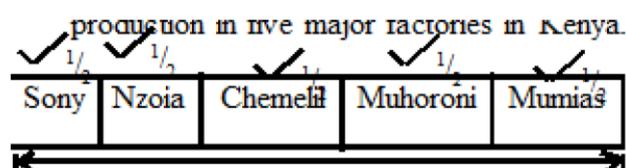
Divided rectanlge showing sugarcane production in five major factories in Kenya.
Sony Nzoia Chemelil Muhoroni Mumias

NB: - Calculations = (1/2 x 6 = 3mks)
- Drawings = 4mks
NB: The rectangle must be 15cm in length.

(ii) Difference in tonnage
Muhoroni 250 000
Nzoia - 100 000
150 000 tonnes (Any 1 x 1 = 1mk)

(iii) Advantages of using divided rectangle ☐ Easy to complete components.

☐ Can accommodate different types of items.

- Gives a good visual impression.   (Any 2 x 1 = 2mks)
      (b) Physical conditions required for growing sugarcane
- High temperatures ranging 200c-280c   throughout the year. This promotes sugar accumulation.
- Rainfall between 1250mm to 2000mm throughout the year/high rainfall that farms growth.
- Well drained soils that favors growth.
- Topography of the land should be undulating flat or gently sloping to allow mechanization.
- Dry sunny harvesting spell. To allow maximum accumulation of sucrose and eases harvesting and transportation.
                                                                                                (Any 4 x 2 = 8mks)

      (c) (i) Uses of sugar
- Sweetener for beverages.
- Manufacturer of local brews.
- Making confectioneries e.g bread, cakes etc.   (Any 3 x 1 = 3mks)
      (ii) Benefits of sugarcane growing to Kenyan economy
- Creates employment to many Kenyans thus earning income.
- Establishment of sugar mills has contributed to industrial development.
- It is a source of income to farmers hence raising their standards of living.
- Produce sugar for domestic use hence saving the country‟s foreign exchange that could have been used for importation.   (Any 4 x 1 = 4mks)

7. (a) (i) Why Kenyan experiences unfavourable balance of trade
- Kenya exports mainly agricultural products which are of low value and import manufactured goods which are of high value.
- The agricultural product exported from Kenya face stiff competition in the world market leading to reduced sales and less earnings.
- The imposed quota system sometimes leads to reduced sales and less earnings.
- Some of the goods exported are of low quality, hence they generate little earnings.   (Any 2 x 1 = 2mks)
      (ii) How the government of Kenya is promoting export trade ▢ It is exploring new markets in for East countries.
- It is setting up trade attaches in all the diplomatic missions abroad.
- It has established export processing of zones (EPZ) and special economic zones (SEZ).
- It is encouraging foreign investors to establish industries for the production of export goods.
- Encouraging production of high quality goods for export.
- It has set up an export promotion council.
- Encouraging Jua kali industries so as to produce export products.   (Any 4 x 2 = 8mks)
      (b) Factors that influence trade
- Demand for goods. Industrialized nations usually require raw materials from developing countries. On the other hand, developing countries import manufactured goods from them.
- Availability of capital - traders who have access to adequate capital are able to start trading enterprises, and stock adequate and appropriate foods needed by customers. Inadequate capital hinders the setting up of large-scale trading enterprises.
- Adequate and efficient means of transport communication are essential for success in trade. Goods have to be moved from the producers to the consumers. Means of communication enhance efficiency in trade.
- Security need to secure goods and traders.
- Trade restriction such as tariffs, quotas and bans reduces both internal and external trade. Population size. Densely populated countries have a large volume of internal trade but may have low volume of external trade if the purchasing power of the people is low.
- Political hostilities discourage trade and sometimes lead to total ban. Trading among countries can only take place if the countries are in food terms.
- Use of varied currencies in different countries can become an obstacle to trade because of varying exchange rates. Trade becomes easier when a common currency is used.
- Aids to trade like banking, insurance and warehousing services facilitate transfer of money used in trade

transactions and also storage of foods.   (Any 4 x 2 = 8mks)

(c) Objectives of establishing COMESA

☐ To create a common market for the goods produced in the member countries.

☐ To eliminate taxes on goods produced within the member countries.

☐ To promote transport and communication between member countries.

☐ To enable member countries to increase the use of their raw materials.

☐ To foster good relations, peace, political stability and high standards of living for member states.

(Any 5 x = 5mks)

(d) Benefits of international trade to Kenya

☐ Earning of foreign exchange throught exports and this income raised standards of living.

☐ Imported industrial inputs have led to the growth of manufacturing industries, promoting employment.

☐ Transport and communication network in Kenya has been improved.

☐ Kenya gets a ready market for its surplus produce which could otherwise gone to leading to income earnings.

☐ Trade encourages specialization increase in production of goods which leads to production of high quality goods.

☐ Kenya is able to import what it needs from other countries thus enabling Kenyans to enjoy a variety of commodities.   (Any 3 x 2 = 6mks)

8. (i) What is domestic tourism?

☐ Domestic tourism is the practise of travelling from ones home to other parts of one"s country of residence to visit tourist attractions.

(ii) Factors that hinder domestic tourists

☐ Roads leading to tourist sites are poorly maintained. This discourages local people from visiting tourist sites.

☐ Inadequate local campaign and advertisement of tourist attractions within the country leads to low public awareness.

☐ Many potential domestic tourists have a negative attitude towards domestic tourism regarding it as a waste of time and money.

☐ High cost of accommodation in hotels and game lodges discourages domestic as they may not have saved sufficient funds.   (Any 4 x 2 = 8mks)

(b) (i) Why domestic tourism should be encouraged

☐ To utilize facilities such as hotels during low foreign tourist season.

☐ To create more awareness among Kenyans about their country.

☐ To provide many Kenyan residents with opportunities for recreation.

☐ To enable people from different communities to interact. This enhances national unity and integration.

☐ To encourage circulation of money within the country and also increase domestic trade.(Any 3 x 1 =3mks) (ii) Effects of forest fires

☐ Shortage of pastures causing loss of life of animals/drying up of plant species.

☐ Migration of animals to areas that have sufficient pasture.

☐ Environmental degradation/destruction of habitat for wildlife.

☐ Some wild animals invade farmlands destroying crops. Some wild animal are killed as they search for food.

(Any 2 x 1 = 2mks)

(c) Factors making Swizerland a major tourist destination in Europe

☐ Favorable climate - warm sunny summers for swimming and sunbathing along lake shored. Cold winters encourage winter sports e.g. skiing.

☐ The varied scenery - snowcapped mountains,   cascading waterfalls and glaciated landscapes provides varied tourist attractions   which are lacking elsewhere in Europe.

☐ The central location of the country within Europe makes it easily accessible form the European countries.

☐ The country is politically neutral. This removes travel restrictions to the country as a tourist destination.

☐ People in the tourist industry speak a variety of foreign languages which makes it easy from tourists to communicate and move around with ease.

☐ Tourist sites are easily accessible because of well-developed transport network.   (Any 6 x 1 = 6mks)

(d) Measures being taken to conserve wildlife

☐ - Establishing the ministry of wildlife to   oversee conservation process.

☐ Creating an anti-poaching unit to track down and arrest poachers.

☐ Forest guards have been employed to protect forests from destruction and so preserve the habit for the wildlife.

☐ Enacting laws and regulations to curb poaching/game trade.

☐ Enhancing international co-operation to help enforce the existing laws/convections which protect wildlife especially the endangered species.

☐ Educating the general public on the need to conserve wildlife and also the local communities who also benefit from the proceeds that come from tourism.

☐ Promoting ecotourism to reduce tourism related environmental damages that may lead to extinction of wildlife species.

☐ Constructing electric fences around the parks to minimize human-animal conflict.

☐ Protecting the endangered species in orphanages and sanctuaries.

☐ Encouraging individuals to set up game ranches for controlled hunting.

☐ Providing veterinary services to treat wild animals translocation of some wild animals to less crowded/safer places.   (Any 2 x 2 = 4mks)

9. (a) (i) What is forestry

☐ Forestry is the Science of developing and managing forests including cultivating them.   (ii) Three characteristics of natural forests ☐ The trees take long to mature.

☐ The trees occur in mixed stand. ☐ Most trees have buttress roots. ☐ The forest have thick covers

☐ The trees stand at different heights.

☐ The trees form a canopy.   (Any 3 x 1 = 3mks)

(iii) Two tropical hardwood tress in Kenya

☐ Meru oak

☐ Elgon olive

☐ Elgon Teak

☐ Camphor

(b) (i) How the following factors influence the distribution of natural forests

☐ Soils

☐ Distribution of different soil types influences the type of forests growing in different regions.

☐ Highly acidic soils lead to growth of coniferous forests.

☐ Saline soils - favour growth of mangrove forests.

☐ Sandy soils -lead to growth of sub-tropical woodlands.

☐ Latosols found in humid regions support tropical rainforest.   (Any 3 x 1 = 3mks)

(ii) Human activities

☐ People clear natural forests for fuel, to farm, mine, settle, road construction etc.

☐ People may encourage growth of forests through afforestation animals and micro-organisms.

☐ Forests are a rich reservoir of research materials e.g for Scientists researching on medicinal plants.

☐ Forests are important in regulation of carbon dioxide in the atmosphere hence reduce global warming.

☐ Forests are important in soil and water conservation and preservation.

(iii) Altitude

☐ The growth is limited to attitudes below 3500m because beyond this, temperatures are very low.

☐ The types of trees growing at different height varies.

☐ At lower level of tropical mountains, there is tropical rainforest which give way to coniferous forest and then bamboo forest.(Consider any other relevant point, well   explained 3 x 2 = 6mks)   (c) (i) Two reasons why you need to prepare a route map.

☐ To avoid wastage of time by getting lost on the way.

☐ To help estimate distance to be covered during the study.

- ☐ To estimate time required for field study.
- ☐ To help decide on the methods to be used for collecting data.
- ☐ To be able to plan for a work schedule.
- ☐ To show the size of area. (Any 2 x 1 = 2mks)

(ii) Problems likely to be encountered

- ☐ Adverse weather e.g hot sun, heavy rain ☐ Attack from wild animals, insects, snakes ☐ Impassable paths within the forests.
- ☐ Lack of resources persons to help with identification of tree species. (Any 3 x 1 = 3mks) 10. (a) (i)
  Difference between a two way road and a one-day road system in Kenya.
- ☐ A two way road refers to a road divided into two with a yellow line and traffic flow in two different ways. While one way road is a double carriage where two roads are build parallel to each other, and on each road, traffic flows in one direction.
- ☐ Causes of accidents on Kenyan roads.
- ☐ Careless driving due to drivers driving under influence of alcohol distorting their judgement of the road.
- ☐ Drivers lack necessary training and hence don‟t observe road signs or safety precautions. ☐ Failure by law enforces to be strict hence allowing fanity vehicles to be on the road.
- ☐ Some roads are very narrow leading to accidents due to congestion.
- ☐ Some vehicles are un-roadworthy of are not well maintained hence fail in breaking systems causing accidents.
- ☐ Overloading of vehicles making them lose balance hence causing accident.

(Any four well explained 4 x 2 = 8mks)

(b) (i) Name towns marked in the map

- ☐ J - Cape town
- ☐ K - Harare
- ☐ L - Cairo (Any 3 x 1 =3mks)

(ii) Countries where Trans Africa Railway is not completed

- ☐ Sudan
- ☐ Central Africa Republic
- ☐ Burkina Faso
- ☐ Mali (Any 2 x 1 = 2mks)

(c) (i) Reasons why the railway transport is not well developed in Africa

- ☐ Most of the railway line were developed by colonial powers without the interest of indigenous people.
- ☐ Inadequate capital - the railway lines are expensive to construct and therefore they are few.
- ☐ Rugged landscapes makes is hard to construct the railway line.
- ☐ Use of different railway gauges that make it impossible for interconnection between countries.
- ☐ There lack the expertize on railway construction industries.

(ii) The role of the St.Lawrence sea way

- ☐ The sea way has made the interior of Canada and U.S.A open to trade. This had increased the volume of trade foods even to external market leading to high income.
- ☐ The dams constructed on the sea way are used for HEP production.
- ☐ There is cheap availability of hydro-electric power which is used in industries.
- ☐ The whole project has attracted many tourists leading to steady flows of foreign exchange.
- ☐ The project created employment opportunities where many people work.
- ☐ Has led to growing of many urban centers with large population which provided market for goods locally produced.

(Any 2 x 2 = 4kms)

MURANG‟A -SOUTH MULTILATERAL EXAMINATIONS
KENYA CERTIFICATE OF SECONDARY EDUCATION
312/1
GEOGRAPHY 312/1
PAPER 1

SECTION A (25 MARKS)
Answer all questions in this section.
1. (a) Name two factors that influence wind erosion in arid areas.   (2mks)
    (b) Name three features resulting from wind erosion in deserts.   (3mks)
2. (a) Name two features resulting from extrusive volcanic activity.
    (2mks)
    (b)   Give three ways in which vulcanicity has influenced human activities in Kenya.
           (3mks)
3. (a) List two processes of river erosion.   (2mks)
    (b) State three factors that influence river erosion.
    (3mks)
4. (a) The diagram below shows relief rainfall.
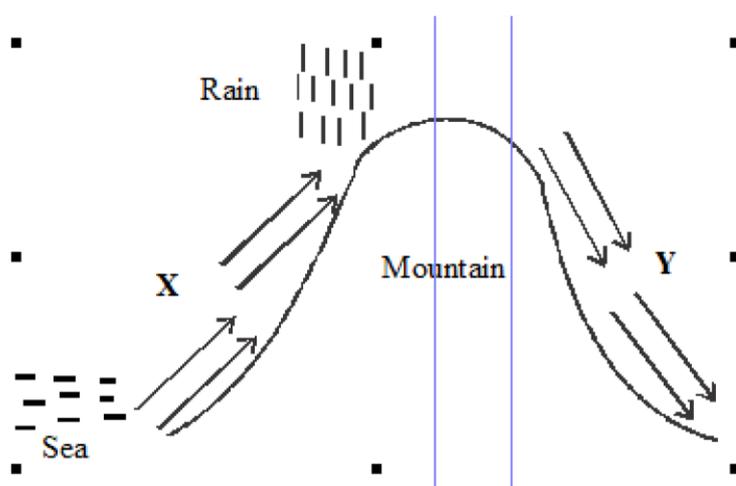
    (i) Name the areas marked X and Y.   (2mks)
    (ii) State three characteristics of the region marked Y.   (3mks)
5. (a) Name two elements of weather that can be marked at a school weather station.
    (2mks)   (b) Give three reasons why the recording of data at a school weather station may be
inaccurate.   (3mks) 6. (a) Study the map of Migwani (1:50,000) provided and answer the questions.
    (i) Give the location of Nzeluni Dispensary using latitudes and longitudes.   (2mks)
    (ii) State two methods used to represent relief in the area covered by the map.
         (2mks)
    (iii) Name three man-made features in arid and square 9980.   (3mks)
    (b)   (i) Measure the length of the all-weather road bound surface from grid square 9077 to 9073. Give
    your answer   in meters.   (2mks)
        (iii) Draw a frame 15cm by 10cm to represent the area bound by grid by references 0080 to 1380 and
    references 0070 to 1370; on it mark and name
        (a) River 1400
        (b) Dam
        (c) A dry weather road
        (d) Conical hill   (5mks)
    (c)   Describe the distribution of settlement in the area covered by the map.
           (6mks)   (d) Describe the drainage of the area covered by the map.
                (6mks)
7. (a) (i) Give three components of the solar system.   (3mks)
            (ii) State two theories of the origin of the solar system.
(2mks)
    (b)   (i) Give two dates in a year during which the hours of light and darkness are equal in both the North
    and South   poles.   (2mks)

(ii) Why do the length of days and nights vary from one part to the earth to another.
(2mks)

(iii) Name two main seasons caused by the revolution of the earth.
(2mks)

(c)　　(i) Explain three reasons why the earth has a spherical shape.　(6mks)　(ii) Give two discontinuities in the earth‟s atmosphere.　(2mks)

(iii) Describe any three characteristics of the troposphere.　(3mks)

(iv) Statethree types of high level clouds.　(3mks)

8.　Study the world map below and answer the questions that follow.
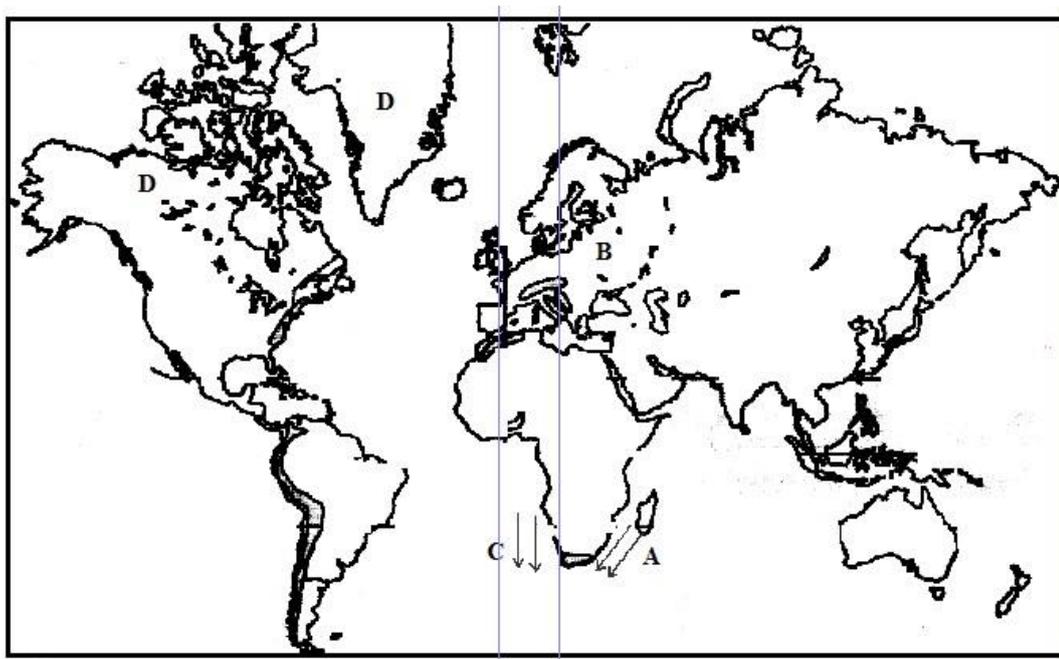
(a)　(i) Name the climatic region marked B and D.　(2mks)

(ii) Name the ocean currents marked C and A.　(2mks)

(b) Describe the characteristics of the vegetation marked T.　(6mks)

(c) Explain how the vegetation in the area marked B adapt itself to the climatic conditions.　(8mks)

(d) You are required to carry out a field study of the natural vegetation within your local environment

9. (a)　(i) Name two component of soil.　(2mks)

(ii) Give two ways in which soils are formed.　(2mks)

(b)　(i) Explain how the following factors influence soil formation.

(i) Climate　(4mks)

(ii) Topography　(4mks)

(c)　(i) Other than soil erosion, state two other ways in which soils way be degenerated.　(2mks)

(ii) Briefly explain two effects of soil erosion to human activities.　(2mks)

(d) Draw a well labelled diagram of the soil catena.　(5mks)

(e) Some geography students intend to carry out a field study of an area under the effect of soil.

(i) Name two types of soil erosion they are likely to identify during the study.　(2mks)

(ii) State four soils conservation measures they are likely to recommend to the residents of the stuffy area.
(4mks)

10. (a)　(i) Identify two fresh water lakes in the Rift valley in Kenya.　(4mks)

(ii)　Describe how lake Victoria was formed.　(4mks)

(iii)　Explain three ways in which lake Victoria has modified the climate of the surrounding area. (6mks)

(b)　(i) Explain why some lakes in the Rift valley are salines.　(6mks)

(ii)　　Give three processes that lead to formation of lakes.　(3mks)

(iii)   Give four economic uses of lakes other than transport.   (4mks) **MURANG"A -SOUTH MULTILATERAL EXAMINATIONS**

KENYA CERTIFICATE OF SECONDARY EDUCATION
312/2
GEOGRAPHY 312/2
PAPER 2
AUGUST

SECTION A (25 MARKS)
Answer all questions in this section.
1.   (a) State two reasons why some industries are located near sources of water.   (2mks)
        (b) Highlight three factors that led to the growth of iron and steel industries in the Rhur region of Germany.
                                                                                                         (3mks)
2.   (a) Apart from urban-rural migration name two types of migration.   (2mks)
        (b) Name three reasons that may lead to urban-rural migration.   (2mks)
3.   (a) Apart from oil, name two other non-renewable sources of energy.   (2mks)
        (b) State three conditions that are necessary for the formation of petroleum.   (3mks) 4.
(a) Apart from HIV and AIDS, give two other causes of mortality in East Africa.   (2mks)
        (b) State three ways in which the spread of HIV and AIDS in Kenya may slow down economic
development.
                                                                                                         (3mks)
5. (a) Give three physical conditions that favour maize cultivation in Nakuru county in Kenya. (3mks)
        (b)   State two problems facing maize farming in Kenya.
        (2mks)   **SECTION B**
        Answer question 6 and any other two questions from this section.
6. The table below shows countries X, Y and Z sugarcane production in 1000 tonnes from1976-1980.

Country	1976	1977	1978	1979	1980
X	20	41	52	60	50
Y	28	32	48	50	43

        (a) (i) Draw comparative bar graph to represent the data.
(7mks)

                (ii)   State two advantages of using comparative bar graph to represent geographical data.
                (2mks)   (iii) Which of the three countries had the highest sugarcane
                production in percentage increase between the
                        period 1976-1980?
(1mk)
        (c)   (i) Outline two physical conditions that favour sugarcane farming in Kenya.
                (2mks)
                (ii)   Describe the cultivation of sugarcane from land preparation to the harvesting stage.
                        (5mks)
        (d)   (i) Explain three problems facing sugarcane farming in Kenya.
                (6mks)
        (e)   Name two by products of sugar.
                (2mks)
7. (a) (i) Name three types of minerals.   (3mks)
        (ii) State three ways in which minerals occur.   (3mks)
        (b)   (i) Describe shaft mining method.
                (5mks)
                (ii)   Outline three challenges faced by shaft miners.
                        (3mks)

(c)   Explain four problems facing the mining industry in Kenya.
(8mks)
(d)   Highlight three ways in which mining derelicts can be reclaimed.
(3mks)

8. (a) Draw an outline map of Kenya.   (2mks)
On it mark and name the following:-

☐ Marsabit game reserve.   (1mk)
☐ Dodori game reserve.   (1mk)
☐ Aberdare National park.   (1mk)

(b)   (i) Apart from national parks, outline three other ways in which wildlife is conserved.
(3mks)
(ii)   Give three reasons why domestic tourism is being encouraged in Kenya.
(3mks)
(c)   Of late there had been a notable decrease in the number of tourists visiting Kenya. Explain three measures that   the country should take in order to attract more tourists.
(6mks)
(d)   Explain four factors which make Swizerland receive more tourists than Kenya?   (8mks)

9. (a) (i) Differentiate transport and communication.   (2mks)
(ii) State three reasons why road network is more widespread than railway network in East Africa.(3mks)
(b)   (i) Outline three benefits derived from the construction of Nairobi-Thika super highway.
(3mks)
(ii)   Draw a sketch map of the Great Lakes and St. Lawrence Seaway. On it mark and name the following:-

☐ Lakes Michigan and Ontario.   (2mks)
☐ Ports Duluth and Chicago.   (2mks) (c) Explain how the following factors hinder transport and communication in Africa.   (4mks) ☐ Terrain.
☐ Shortage of skilled labour.

(d) Explain four benefits of transport in the economic development of Africa.   (8mks)

10. (a) (i) State three factors that have influenced the development of industries in Eldoret town.   (3mks)
(ii) Name two non-food agricultural industries in Thika.   (2mks)
(b)   (i) Explain ways in which each of the following factors may affect the location and development of industries.

☐ Raw materials   (2mks)
☐ Transport   (2mks)
☐ Market   (2mks)

(ii)   Identify the main industries found in each of the following towns.

☐ Kisumu   (1mk)
☐ Nakuru   (1mk)

(c)   Give four reasons why Kenya should become an industrialized county as per the vision 2030.
(4mks)   (d) Describe the measures which should be taken by the Kenyan government to control effects of industrialization.
(4mks)

(e) A from four class carried out a field study on industrialization in Thika town.
(i) Give two possible objectives of their study.
(2mks)
(ii) List two methods of data recording that they will use to record the data.   (2mks)

MURANG‟A SOUTH MULTILATERAL EXAMS
FORM FOUR
AUG/SEPT 2015
GEOGRAPHY 312/1

MARKING SCHEME PAPER 1

1. (a)   Mature of the surface rocks.
- Obstacles on the path of wind
- Speed of wind   (Any 2 x 1 = 2mks)

(b)
- Mushroom block. □ Rock pedestals
- Deflation hollow/oasis
- Zeugen
- Yardangs
- Ventifocts and drainkanter
- Millet seeds

2. (a)
- Caldera/crater
- Lava plateau/lava plains/tuffs plateau
- Composite volcano/plug dome/lava domes
- Ash and under cones/parasitic cones
- Spine/volcanic plug
- Hot springs/seyseus/hot water pools

(b)
- Volcanic rocks of Kenya highlands have been weathered to produce fertile soils for agriculture.
- Landforms resulting from volcanic activity are tourist attractions/scenic beauty e.g. Mt. Kenya.
- Steam jets at Olkaria are used for geothermal production.
- Gases associated with volcanic are mined in Kenya for industrial use e.g. carbon dioxide at Kereita.
- Steep slopes formed through volcanic activity discourage settlement/farming/development of transport.

(Any 3 x 1 = 3mks)

3. (a) Abrasion/corrosion
- Solution/corrosion
- Attrition
- Hydraulic/quarrying

(b) River's load
- Rivers volume
- Slope of land
- Nature of rock.   (Any 3 x 1 = 3mks)

4.   (i) X - windward side.   (1mk)
       Y - leeward side.   (1mk)
      (ii) - Low rainfall
      - Dry winds
      - Scanty vegetation   (Any 3 x 1= 3mks)

5.   (a)
- Temperature
- Rainfall
- Humidity
- Wind speed/force/strength/direction
- Cloud cover
- Sunshine   (Any 2 x 1 = 2mks)

(b)
- Use of defective instruments. □ Human error
- Interfere with the instrument
- Poor siting of a weather station

☐   Extreme weather conditions

☐   Natural calamities

6.

(a)   (i)   Lat - $1^0$05''S

          Long - $38^0$05''E   (2 x 1 =2mks)

(ii) Contours

          - Trigonometrical status   (2 x 1 =2mks)

(iii) Shops

☐   School

☐   Dispensary

☐   Any weather road

☐   Settlement   (3 x 1 = 3mks)

(b) (i) 4km 500 $\pm$ 100

        (ii)
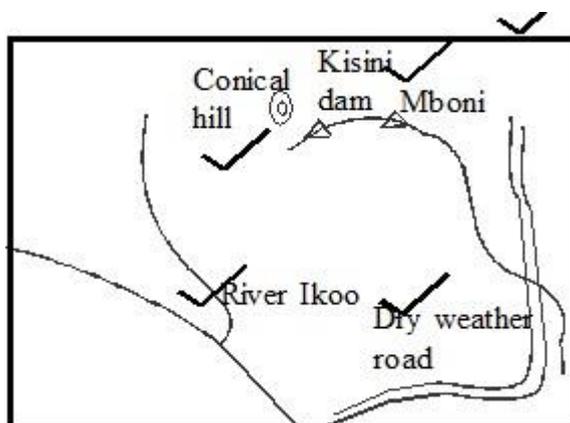
(c) There are few settlement e.g Nzeluni.

☐   There are scattered settlements to the Eastern part of the map.

☐   There are nucleated settlements mainly around shopping centres e.g Kyome.

☐   Some areas such as Nzoia have no settlement

(d)

☐   River Ikoo and Vinda form the main drainage systems in the area.

☐   The area had numerous permanent rivers.

☐   The main drainage pattern is Dendritic eg. River Kioo and Munyuni features are manmade water features
     including resources eg. dam at 9078.

☐   Most parts of the area covered by the map are well drained.   (Any 3 x 2 = 6mks)

7. (a) (i)

☐   The sun

☐   The planets

☐   Asteroids

☐   Metears/meteorites

☐   Comets

☐   Natural satelite   (Any 3 x 1 = 3mks)

        (ii) Passing star theory/big bang Nebular cloud theory   (Any 2 x 1 = 2mks)

(b)   (i) - 21st March - 23rd September

        (ii) - The earth is titled on its axis

    ☐ The apparent movement of the sun within the tropics/revolution of the earth.

        (iii) Summer

Winter

(c) (i)

☐ The earth experiences the force of gravity pulling towards the centre which creates a rounding effect on its shape.

☐ The North and South poles experience centripetal force which constantly full towards each other causing the flattening atthe poles.

☐ The earth experiences the centrifugal force which causes it to bulge at the equator.   (Any 3 x 2 = 6mks)

(ii)

☐ Tropopause

☐ Mesopause   (Any 2 x 1 = 2mks)

(iii)

☐ Contain the most weather making constituents. ☐ It is the life supporting layer

☐ Temperature decrease with increase in height

☐ Pressure falls with increase in height

☐ It contains most water vapour, clouds, dust and other pollutants/very unstable. (Any 3 x 1 = 3mks) (iv)

☐ Cirrus

☐ Cirro -cumulus

☐ Cirro-stratus   (Any 3 x 1 = 3mks)

8.

(a) (i) B - Desert

D - Tundual/arctic/polar

(ii) C - Cold Benguela current.

A - Warm Agulhas/Mozambique

(b) This is mediterranean vegetation

☐ Some plants have small thick-skinned leathery/spiny leaves.

☐ Some plants have long roots.

☐ Some plants have thick barks.

☐ Some plants have large fleshy bulbous roots

☐ Some plants have shiny/waxy leaves

☐ Some trees are deciduous

☐ Some plants are evergreen

☐ The vegetation is adapted to the long hot and dry summers ☐ Some plants have fleshy leaves.

☐ Gases dry off during summer and germinate during winter.

☐ Scrubs/thickets/thorn bush/inacquis/machia/chappaval/males are common.

☐ Woody scrub is common in dry areas.   (Any 6 x 1 = 6mks)

(c) Some plants have thick/fleshy/succulent leaves to enable them store water.

☐ Some have long roots to top the underground   water.

☐ Some have no leaves/have thin/spiny waxy/needle like leaves to reduce transpiration.

☐ Some plants seed remain dormant awaiting the short rains.

☐ Some plants have thick/hard barks to reduce transpiration.

☐ Some plants wilt due to the absence of moisture but have quick recovery ability.

☐ Some plants have thorns to protect themselves from browsing animals.

☐ Some plants are quick sprouting to take advantage of the short-lived desert rains.

☐ Most plants are stunted/dwarf like due to the harsh conditions.   (Any 2 x 4 = 8mks)

(d) (i) Formulate objectives

☐ Identify methods of data collection

☐ Seeking permission for relevant authorities.

- Identifying tools for study
- Dividing themselves into groups.   (Accept any relevant points any 2 x 1 = 2mks) (ii)
- Administering questionnaire
- Reading from secondary sources
- Observation
- Collecting samples
- Taking photographs (Any 3 x 1 = 3mks)
      (iii)
- Some plants have redicinol value. ☐ Some plants are source of food
- Some plants are fodder for animals
- Roots of plants, bind, soil particles together hence prevent soil erosion.   (Any 2 x 1 = 2mks)
  (Accept any other relevant point)

9. (a) (i)
- Soil water
- Soil air
- Living organisms/humus
- Soil organic matter
- Soil/inorganic/mineral matter   (Any 2 x 1 =2mks)
      (iii)
- Through weathering
- Through decomposition of organic matter
- Through leaching.   (Any 2 x 1 = 2mks)

(b) (i) Climate
- Climatic conditions affect the rate of weathering taking place on a given rock through seasonal vanation in rainfall and temperature.
- Areas with heavy precipitation rainfall are heavily reached and weathered compared to drier areas, they therefore have deep soils.
- High temperatures promote rapid faster weathering and chemical changes in the soil (cold temperatures slow these processes).
- Rainfall and temperature determine the organic matter content of the soil.
- Running water and wind acts as agents of soil erosion, blowing fine sand and dust and depositing them far away forming rich fertile soils.   (2 x 2 = 4mks)
      (ii) Topography
- Soils on mountain slopes are heavily eroded hence have thin soils.
- Plateau soils/soils in areas of gentle slopes are deep and have well developed profiles.
- Plains and valley bottoms have deep soils due to deposition of weathered and eroded materials. (2 x 2 = 4mks)

(c) (i)
- Soil water logging
- Burning of land/shifting cultivation/slash and burn.
- Deforestation
- Monoculture
- Overgrazing
- Over cropping
- Wrong fertilizer application
      (ii)
- Sand eroded from steep slopes is deposited on the riverbeds and can be harvested for building and can be harvested for building and construction.
- Soil erosion loses productive top soils thus lowers agricultural potential of land.
- During soil erosion, rich soils may create fertile lands for agricultural production.

□ Eroded sediments from farmlands and dumping sites may contain pollutants/agrochemicals that they kill aquatic life if it reaches oceans/lakes/rivers. They also make water unfit for human consumption.

□ Soil erosion may destroy structures e.g buildings, bridges, roads as it weakens their foundations.

□ Also eroded alluvial deposits on river beds make the river channel shallower resulting into frequent flooding. (d)

(5mks)

(e) (i)
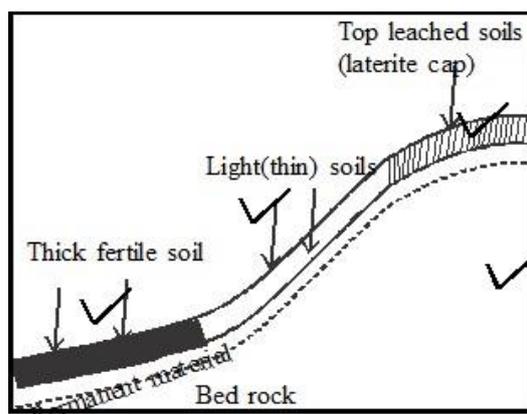
□ Gulley erosion
□ Sheet erosion
□ Splash
□ Rill erosion
□ Wind

(ii) Crop rotation

□ mixed farming
□ Cover cropping
□ Afforestation
□ Mulching
□ Contour ploughing
□ Strip cropping
□ Bush fallowing
□ Intercropping   (Accept any other relevant point any 4 x 1 = 4mks)

10. (a) (i)   L. Naivasha
                  L. Baringo
         (ii) Town movements led to crustal downwarping.

□ A shallow depression was formed.
□ The areas around the depression underwent uplifting.
□ The uplifting reversed the direction of rivers such as R. Kagera and Katonga.
□ Water from the rivers and from rains eventually filled the depression.
□ The resulting feature became a lake.
□ The point must be scored to score.

(b)

□ The lake lacks outlet to the sea thus, mineral salts accumulate in its water.
□ Presence of salt-bearing rocks on the lake bed leads to mineral salts dissolving in the water in the lake.
□ The high temperatures in the area lead to high evaporation from the lake resulting inhigh concentrating in high concentration of mineral salts in the water.
□ Mineral salts are deposited into the lake by surface run-off increasing the concentration of salts in the water.
□ Underground seepage of the water not in rich in mineral salts adds to the salt in the lake. (Any 3 x 2 =6mks) (ii) Crustal warping

- ☐ Volcanicity activity
- ☐ Erosion
- ☐ Human activity
- ☐ Mass wasting
- ☐ Weathering by solution
- ☐ Falling meteorites
      (iii)
- ☐ Lakes are scenic sites which promote tourism/recreation.
- ☐ They provide water for irrigation/domestic/industrial use.
- ☐ They are reservoirs for water used for   generating HEP.
- ☐ They are used as fisheries.
- ☐ Some lakes have sand that is harvested for building and construction.   (Any 4 x 1 = 4mks)

MURANG"A SOUTH MULTILATERAL EXAMS
FORM FOUR
AUG/SEPT 2015
GEOGRAPHY
312/2
MARKING SCHEME PAPER 2

1. (a) Reasons why some industries are located near sources of water ☐

Some industries e.g. breweries use water as a raw material ☐ For cooling

machines to avoid damage by heat. ☐ For cleaning purposes

☐   To dispose off their waste material through water

☐   For provision of H.E.P

☐   Water provides cheap means of transport

☐   Paper and pulp industries use water to debark the logs.

(b) Factors for growth of iron and steel industries in the Ruhr region of Germany

☐ Availability of coal, iron ore and limestone as a raw material.

☐   Cheap water transport provide by rivers Rhine/Ruhr/Lippe/Wupper/Emscher ☐ The rivers provided water required for cooling machines/industrial use.

☐   Abundant sources of power provided by coal/imported petroleum/H.E.P required in the industry.

☐   Availability of skilled labour from the local population.

☐   Presence of porous rocks.

☐   Presence of non-porous rocks underneath the deposit of flora and fauna.

☐   Deposition of other layers of rocks/non porous rock over the remains of flora and fauna.

☐   Compression of the remains of flora and fauna.

(4) (a)

☐   Natural calamities, conflicts

☐   Low nutritional stds/famine

☐   Other epidemics/diseases

☐   Road carnage

(b)

☐   Sickness leads to absentism from work/reduced productivity.

☐   Money spent in treatment can be used for other economic activities.

☐   Deaths resulting from the disease leads to loss of economically productive people   (3 x 1 = 3mks)

5. (a) Three physical conditions that favour maize cultivation in Kenya

☐   Temperatures ranging from 10-30^{0}c/warm hot

conditions. ☐ Rainfall ranging from 800-2500mm ☐ Deep,

well drained volcanic soils. ☐ Gently sloping/undulating land

☐   Sunny dry season for ripening.

(b) Problems facing maize farming in Kenya ☐

High costs of farm inputs/poor quality seeds.

☐   Unpredictable climatic conditions

☐   Delayed payment/fluctuation of prices

☐   Diseases e.g white leaf bright/stalk rot/maize streak/smut/rust.

☐   Pests e.g silkworms/maize stalk borer/aryworms/weevils/beetles/birds/rodents.

☐   Striga weed/couch grass.   (Any 2 x 1 = 2mks) **SECTION B** 6.

(a) (i) BAR GRAPHS ATTACHED

X, Y anc Z sugarcane production in 1000 tonnes from, 1976 - 1980
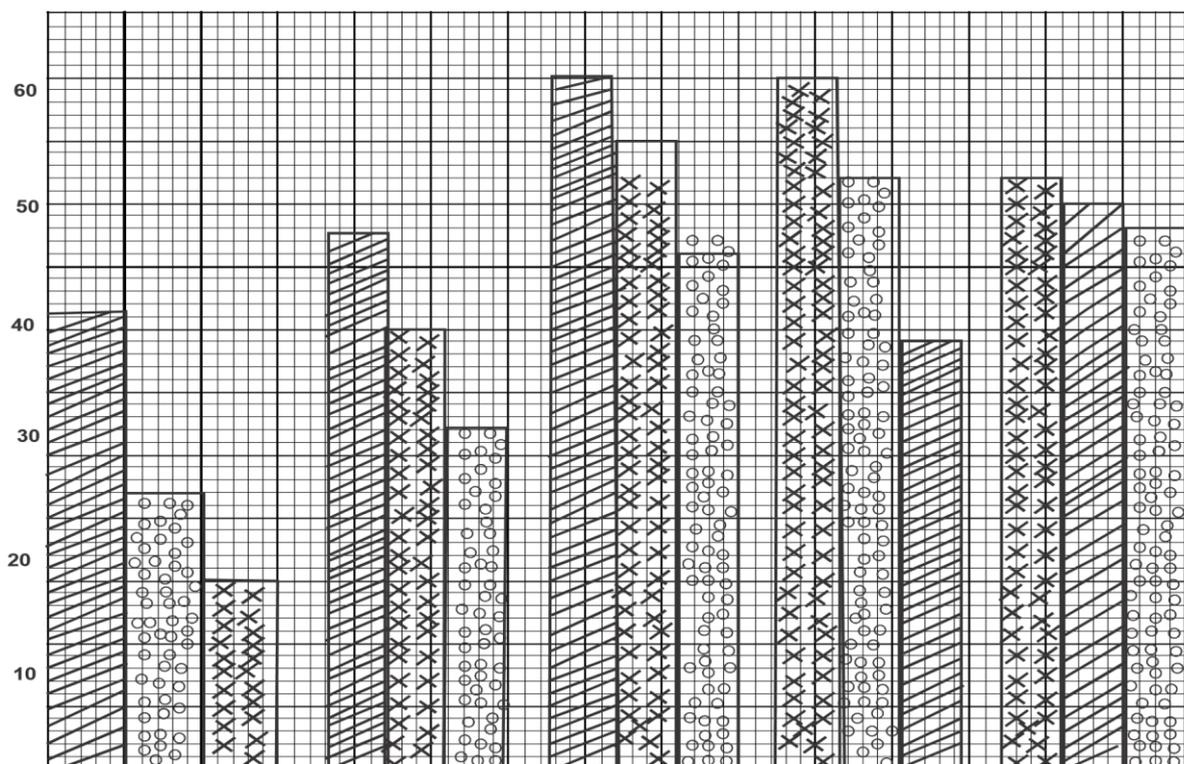
KEY

Title - 1mk
Key - 1mk
Labelling axis - 2mks
Correct group bars @ 1mk = 5mks
Total 9mks

(ii) Advantages of using comparative bar graph
– Values in the same group can be compared
▢ They give clear visual impression.
▢ Individual contribution made by variables in each group is easily identified/easy to read.
▢ They easily show the trend of the given data.   (Any 2 x 1 = 2mks)
(iii) Country Y   (1mk)
(b) (i) Physical conditions that favour sugarcane farming in Kenya.
▢   Well drained, deep, alluvial/clay/black cotton soils.
▢   Gently sloping/undulating landscape.
▢   High rainfall 1200mm-1500mm well distributed throughout the year.
▢   High temperatures $21\text{-}28^{0}c$
▢   Long periods of sunlight.   (Any 2 x 1 = 2mks)
       (ii) Sugarcane cultivation from land preparation to
harvesting ▢ The land is cleared.
▢   It is ploughed using either tractors or ox drawn ploughs.

▢

- Harrowing is done to loosen the large lumps of soil.
- Shallow furrows are dug at intervals of 1-2 and 1-8 meters.
- Cuttings/seed cane is planted in furrows
- After 18 months the cane is ready for harvesting.
- The cane is cut/harvested using pangas.
- The harvested cane is loaded into lorries for transporting to the factory. (Any 5 x 1 = 5mks)
  NOTE: SEQUENCE MUST BE FOLLOWED TO SCORE.

(c) Problems facing sugarcane farming in Kenya

- Pests such as termites/white grub/diseases such as ratoon stunting and smut attack the plants and lower the yields leading to low income for the farmers.
- Accidental fires/fires set by arsonists destroy the cane resulting in heavy losses to the farmers.
- Flooding of the market with cheap imported sugar results in unfair competition thus causing delay in payment to the farmers.
- Delay in harvesting reduces the quality/ tonnage of the cane reducing the farmers earnings.
- Closure of some industries had deprived farmers of their source of income/annual disputes the farmers calendar of activities.
- Poor feeder roads in some areas leads to delayed delivery of cane to the factory lowering the quality and subsequently the profit to the farmers.
- Prolonged droughts in some areas destroy the crop leading to heavy losses.
- High cost of farm inputs reduce the farmers profit margins.
- Mismanagement of factories/co-operatives leads to delayed payments thus discouraging the farmers.
  (Any 3 x 2 = 6mks)

(d) By-products of sugar

- Molasses
- Baggage
- Wax
- Filter cake/filter mud (Any 2 x 1 = 2mks)

(c) (i) Types of minerals

- Metallic
- Non-metallic
- Energy minerals (Any 3 x 1 = 3mks)
  (ii) Occurrence of minerals
- Veins and lodes
- Beds and seams
- Alluvial deposits
- Weathering products (Any 3 x 1 = 3mks)

(d) (i) Shaft mining method

- A vertical shaft is sunk/dug
- Horizontal tunners are dug
- Props are used to support the roof of the horizontal tunnel.
- Light railway line/conveyerbelt is laid along the floor of the horizontal tunnel. ☐ Mineral ores are blasted.
- Cages/ranes are used to transport the ores to the earth"s surface.
  NB: SEQUENCE MUST BE FOLLOWED TO SCORE
  (ii) Challenges faced by shaft miners
- Sometimes mines get flooded with subterranean water.
- There are occassional emissions of poisonous gases in the mines.
- The dust produced causes respiratory diseases.
- Sometimes tunnels collapse causing death of miners. (Any 3 x 1 = 3mks)

(c) Problems facing the mining industry in Kenya

☐ Some minerals are found in remote/inaccessible areas which makes them difficult/exploitation.

☐ Pollution of the areas by noise/blasts/smoke/waterproofs are all health hazard.

☐ The country faces shortage/inadequate capital for exploitation.

☐ Shortage of skilled personnel hence country relies on expatriates who remit their salaries and dividends to their foreign countries.

Land use conflict eg. Titanium mining in Kwale between Tiomin company and the local people delays/hinders mining.   (Any 4x 1 = 4mks)

☐

(d) Reclamation of mining derelicts
- Planting trees
- Creating a park to attract tourists
- Introducing for settlement/farming
- Refilling the holes. (Any 3 x 1 = 3mks)

8. (a) Map of Kenya
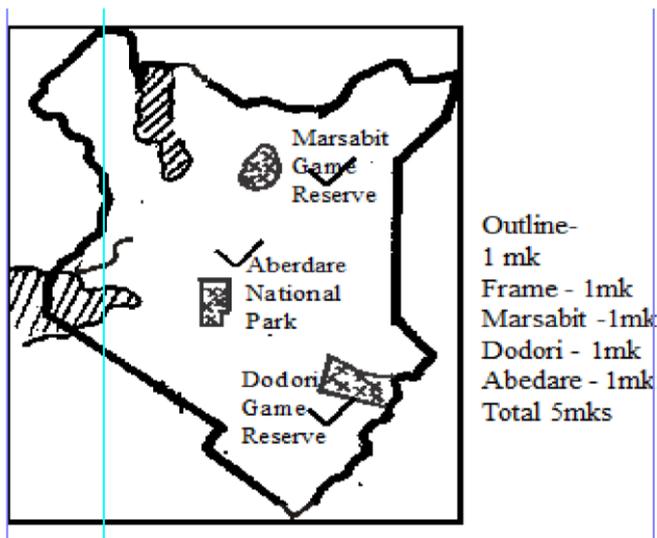
(b) (i) Ways in which wildlife is conserved apart from national parks
- Encouraging individuals to set up game reserves/ranches.
- Banning of trade in wildlife products.
- Encouraging wildlife conservation education/ecotourism.
- Employing anti-poaching unit in the gameparks orphanage/sanctuaries/arboretum.
- Promoting peaceful coexistence between wildlife and human beings.
- Setting up game reserves.
- Research on diseases/pest affecting wildlife.
- Establishment of buffer zone (Nyayo tea zones)

(ii) Why domestic tourism is being encouraged
- To make use of tourist facilities during the low tourist season.
- In order for Kenyans to appreciate their own country/appreciate Kenya‟s natural heritage.
- To facilitate interaction/cultural exchange among different communities/enhance national unity.
- To expose people to locally produced artifacts.
- To expose Kenyans to wider variety of recreation facilities.
- To create employment/income.   (Any 3 x 1 = 3mks)

(c) Measures Kenya should take in order to attract more tourists
- Improving infrastructure/roads/airports/ communications to all tourist sites in order to make them accessible.
- Improving security to ensure the safety of the tourist is guaranteed.
- Marketing the country more aggressively in order to make it more known/improve the image of the country abroad.
- Establishing a diversity of tourist attractions to avoid relying entirely on the traditional attractions/reduce competition with other tourist destinations.
- Establishing/modernizing tourist facilities in areas that have high potential such as Western Kenya where such facilities are inadequate.
-

☐ Improve/train personnel to serve tourists better/sensitize citizens on the need to be hospitable to tourists.
 (Any 3 x 2 = 6mks)

(d) Factors which make Swizerland receive more tourists than Kenya

☐ Swizerland is located in Central Europe making it easily accessible to tourists of European origin while Kenya is far from   Europe.

☐ Some of the tourist attractions in the two countries are similar hence tourists prefer those that are nearer home. The peaceful atmosphere/political neutrality in Swizerland encourage tourists as of insecurity which would scare away tourists.

☐ Swizerland mount more effective marketing promotion than Kenya.

☐ The well-developed transport network in Swizerland provides easy access to tourist sites while in Kenya many roads are poorly maintained.

☐ In Swizerland there is more encouragement which lowers the rates charged for tourist facilities while in Kenya this is not common.

☐ Well-developed financial institutions/efficient banking services.

☐ Headquater of many international organizations hence people who visit the country for international meetings also take time off to tour various parts of the country.

☐ Swizerland had highly trained personnel in hotels industry/hospitality/high class hotels.

☐ The Swiss are able to speak many languages.

☐ Double season in Swizerland has enabled tourists visit the country throughout the year.
 (Any 4 x 2 = 8mks)

9.

(a) (i) Transport is the movement of goods and people from one place to another while communication is the transmission of ideas or information from one person to another.   (2mks)

(ii) Why road network is more widespread than railway network in East Africa ☐ Road network is cheaper to construct and maintain.

☐ Roads are flexible and provide door to door services.

☐ Roads can be used by a wide range of transport agents/they are more versatile.

☐ Rods are faster to use.

☐ There is greater demand for road transport than railway transport.

☐ Roads can be constructed on a varied terrain.   (Any 3 x 1 = 3mks)

(b) (i) Benefits of Nairobi -Thika super highway

☐ Has reduced severe traffic congestion/   delays/saves time.

☐ Reduced frequent road accidents.

☐ Increased employment opportunities for drivers/conductors/loaders as more vehicles ply the highway.

☐ Faster transport of goods/passengers.

☐ Development of urban centres along the highway/businesses.

☐ Increased volume of goods transported as raw materials to industries in Nairobi/Thika and finished goods to the market.

☐ Has enhanced mobility of labour to industries in Nairobi/Thika hence reduced labour shortages.

☐

(ii) Sketch map of the Great lakes and St. Lawrence seaway.
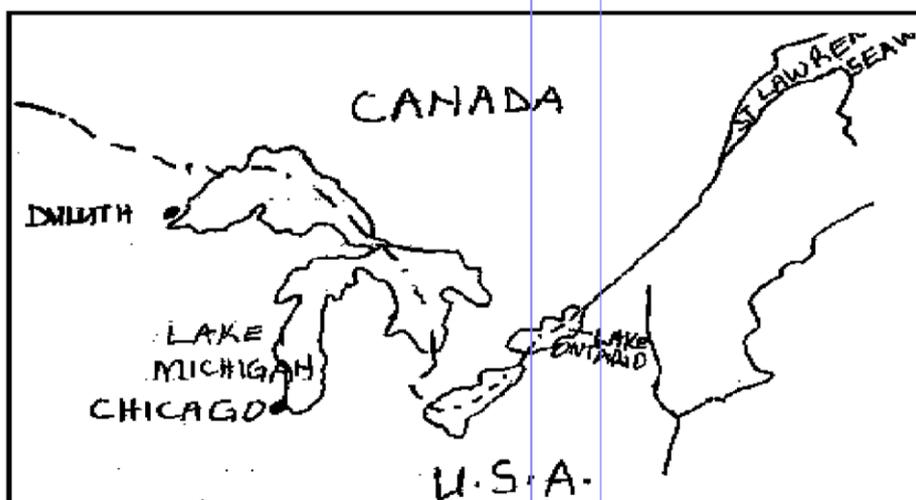
(c) Terrain

☐ The African region has rugged terrain with numerous steep slopes, escarpments, Rift valley and mountains. This has vendered the establishment of transport difficult/very expensive.

☐ Heavy rains along steep slopes can wash away the rails/ trains and locomotives cannot climb steep slopes.

(Any 2 x 1 = 2mks)

(c) Shortage of skilled labour

There is shortage of skilled personnel leading to poorly constructed roads that wear our very fast and communication systems that cannot adopt to changing needs.

☐ The countries rely on expatriates to provide technical assistance in construction of lines of transport which is very expensive.   (Any 2 x 1 = 2mks)

(d) Benefits of transport in the economic development of Africa

☐ Increased movement of goods and people which leads to greater trade and exchange of ideas.

☐ Creation of employment opportunities which raises the standards of living of the people.

☐ Promotion of tourism which generates foreign exchange which is used to develop other sectors of the economy.

☐ Promotes industrializations as raw materials can be transported to the processing areas and finished products to the markets cheaply.

☐ Has enhanced mobility of labour reducing labour shortages.

☐ Generates revenue to the government through taxation/income to their owners.

☐ Promotion of international understanding as people from different countries are now in close contact and are appreciating other peoples culture.

☐ Transport opens up remote areas for exploitation of natural resources such as minerals.   (Any 4 x 1 = 4mks)

10. (a) (i) Availability of labour from the sorrounding population. ☐ Availability of agricultural raw materials.

☐ Well-developed transport links with other parts of the country.

☐ Availability of ready market.

☐ Availability of power

☐ Government policy

(ii)

☐ Leather tanning

☐ Tobacco treatment/processing

☐ Textiles

☐

☐ Cotton   (2 x 1 = 2mks)

   (b) (i) Raw materials

☐ Its availability

☐ In exhaustibility

☐ Its bulkiness   (2 x 1 = 2mks)

   Transport

☐ Cost of transporting raw materials and finished products

☐ Presence and absence of communication network. (2 x 1 = 2mks) Markets

☐ Industries delaying with perishable goods are close to the market.

☐ Industries who products are bulky are located near the market to reduce on transport cost. (ii) Kisumu

☐ Fish processing

☐ Textile manufacturing   (1x 1 = 1mk)

   Nakuru

☐ Soft drink making

☐ Flour milling   (1x 1 = 1mk)

(c) To diversify her economy

☐ To create more employment opportunities

☐ For self-sufficient/reduce importation/save foreign currency ☐ To maximize use of her resources/raw materials.

☐ To uplift standard of living of the citizens.

☐ To be able to increase the value of her exports/quality.

☐ To improve her balance of trade.

(d) Water pollution - treating the industrial waste to reduce the negative impact of industrial effluents.

☐ Recycling waste in order to reduce the industrial waste turnover.   (4 x 2 = 8mks)

(e) (i) To find out the type of industries that are within Thika town

☐ To investigate the course of industrial expansion within the town. (2 x 1 = 2mks) (ii) Tallying

☐ Taking photographs

☐ Note taking

  Filling in questionnaire   (2 x 1 = 2mks)

☐

KIRINYAGA WEST SUB-COUNTY EFFECTIVE „40" EXAMINATION 2015
Kenya Certificate Of Secondary Education.
312/1
GEOGRAPHY
PAPER 1
SECTION A

___

Answer all questions in this section

1   (a) What is physical enviroment?   (2mks)
     (b) State three reasons why it is important to study Geography   (3mks)
2   (a) Describe the characteristics of the following layers of the earth"s structure
          (i) Lithosphere (crust)   (3mks)
          (ii) The core   (3mks)
3   (a) What is a lake?   (2mks)
     (b) State three reasons as to why Lake Naivasha as a fresh water lake   (3mks)
4   (a) What is faulting ?   (2mks)
     (b) Name three features formed through faulting   (3mks)
5   (a). The table below shows temperature and rainfall figures for Transtein , Germany . Use it to answer the
     questionsthat follows.

Months	J	F	M	A	M	J	J	A	S	O	N	D
Temps in 0⁰c	-4	-2	2	6	11	15	16	16	12	7	2	-2
Rainfall in mm	84	78	97	114	143	181	188	167	150	96	85	96

     (a) Calculate the annual range of temperature   (1mks)
     (b) Describe the climate of the above station   (3mks)
SECTION B
Answer question 6 and any other two questions in this section
6. Study the map of Migwani 1:50.00 (sheet 151/1) provided and answer the following questions .
(a)   (i)Give the latitudinal extent of the area covered by the map   (2mks)
        (ii)Name two symbols used to represent relief in the area covered by the map   (2mks)
        (iii)What is the name of the physical feature found at grid reference 035830   (1mk)
(b)   (i) Draw a rectangle measuring 12cm by 16cm to enclose the area within Easting 06 to Easting 12 and
            Northing 63 to Northing 71   (1mk)
        (ii) On the rectangle you have drawn mark and Name the following
            Steep sloping areas
            Water pipe line
            - River Ikoo   (3mks)
(c)   (i) Measure the Length of dry weather road from grid reference 088706 to grid reference 122763 . Present
        your answer in Metres   (2mks)
        (ii) Describe the relief of the area covered by the map   (5mks)
(d)   Citing evidence from the map give two functions of Mutito Township   (4mks)
        (d) Describe the drainage of the area covered by the map   (5mks)
7   (a) (i) What is a rock?   (2mks)
          (ii) Give two types of Intrusive Igneous rocks   (2mks)
          (iii) State threecharacteristics of sedimentary rocks   (3mks)
       (b)   The table below shows some original rocks
         Name their metamorphic equivalent   (4mks
(Origina rock)   Metamorphic
     Granite   …………………………………….

___

Sandstone ……………………………………….
Clay ………………………………………. Limestone
……………………………………….

(c)   Describe three ways through which original rocks turns into metamorphic rocks   (6mks)
(d)   You are supposed to carry out a field study on rocks around your school
   (i)   Give two methods of data collection you would use   (2mks)
   (ii)   State two objectives of your study   (2 mks)   (iii) Give reasons as to why it would be necessary to carry a geological hamme   (1mk)
(v) State three problems you are likely to encounter in the course of the field study   (3mks)

8   (a) (i) What is a fault?   (2mks)
      (ii) Name tworift systems in Africa   (2mks)
   (b)   With the aid of a well labelled diagrams,describe how the rift valley was formed through compressional   forces   (8mks)
   (c). (i)Name three features associated with folding   (3mks)
(ii)Explain the significance of faulting   (10mks)

9   (a) What is mass wasting?   (2mks)
      (i) Explain three factors which influence the rate of movement of weathered materials down the slope   (6mks)
(ii)State four effects of soil creep   (4mks)
   (b)   Explain three effects of landslides   (6mks)
   (c)   Students from Yembo Secondary School carried out a field study in an area which had experiences a landslide
      (i)State **two** reasons for seeking permisssion   (2mks)
(ii)Give **two** methods of data recording they could have used   (2mks)
      (iii)Highlight **three** follow-up activities they could have engaged themselves in after the study   (3mks)

10 (a) Give **three** sources of groundwater   (3mks)
      (i) What is a water-table   (1mk)
      (ii) The diagram below shows zones of groundwater
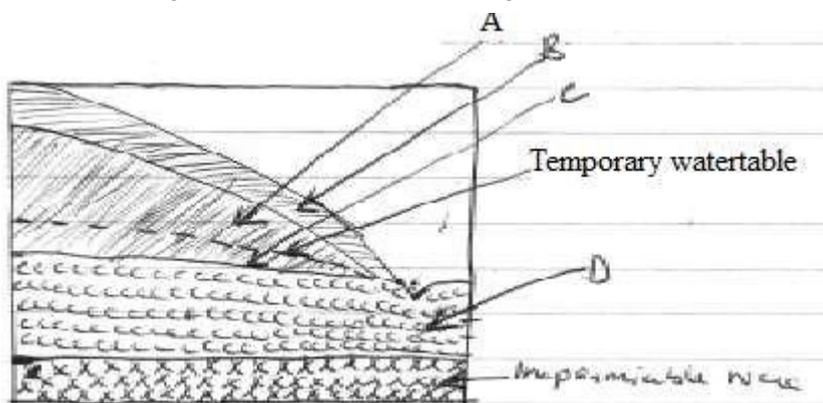
Name the parts marked A, B, C and D   (4mks)
   (b)   State three conditions which are ideal for formation of Artesian wells   (3mks)   (c) (i)   Name three surface features found in Limestone areas   (3mks)
   (ii)   Give the main reason why limestone areas have no surface drainage   (1mk)
   (d) (i) Describe how limestone pillars are formed   (6mks)
(ii) Explain the significance of resultant features in Limestone areas   (4mks) **KIRINYAGA WEST SUB-COUNTY EFFECTIVE „40" EXAMINATION 2015**
   Kenya Certificate Of Secondary Education. 312/2
      GEOGRAPHY
   PAPER 2

SECTION A
Answer all the questions in this section
1. (a) State two features of pastoralism in Kenya (2mks)
   (b) State three problems facing dairy farming in Kenya (3mks)
2. (a) Nametwo methods used to preserve fish (2mks)
   (b) Give three reasons why it is important to encourage fish farming in Kenya. (3mks)
3. (a) Differentiate between afforestation and reforestation (2mks)
   (b) Give three reasons why hardwood tree species in Kenya are in danger of extinction (3mks)
4. (a) Nametwo factors influencing the occurence of minerals in the earth''s crust (2mks)
   (b) State three negative effects of mining on the environment (3mks)
5. (a) State two major causes of noise pollution in urban centres (2mks)
   (b) State three problems associated with windstorms (3mks)

SECTION B - Answer question 6 and any other two questions in this section
6. The table below shows the number of tourists who visited East African Countries from other parts of the world. Use it to answer questions (a) and b(i) In the Rift Valley Province in (000,000)

PLACE OF VISIT	YEAR		
	2010	2011	2012
UGANDA	30800	22300	25900
KENYA	55000	40000	30000
TANZANIA	40000	35100	28100
OTHERS	28000	16000	15800

   (a) Using a vertical scale of 1cm to represent 5000
      (i) Draw a comparative bar graph to represent the data above (6mks)
      (ii) State two advantages of using comparative bar graph to represent geographical data (2mks)
   (b) (i) State two reasons for the decline of tourists who visited Kenya from 2010-2012 (2mks)
      (ii) State three problems associated with tourism in Kenya (3mks)
   (c) Name two game reserves found in the Rift Valley of Kenya (2mks)
      (ii) Explain three problems experienced by Kenya government in the effort to conserve wildllife (6mks)
   (d) State four differences between tourism in Kenya and Switzerland (4mks)
7. (a) (i) State three physical condtions that favour coffee growing in the central highlands of Kenya (3mks)
      (ii) Describe the stages involved in coffee production from picking to marketing (6mks)
   (b) (i) Mention one cocoa growing area in Ghana (1mk)
      (ii) State four problems that are faced by cocoa farmers in Ghana (4mks)
   (c) (i) State three physical conditions that favour large scale sugarcane farming in Kenya (3mks) (ii) Your class visited a sugar factory for a field study on sugar cane processing
      (b) Outline four stages for sugar processing that the class may have observed (4mks)
      (c) Name twoby- products of sugarcane that the class may have identified during the study (2mks)
      (d) Give two reasons why a working schedule was necessary during the field study (2mks)
8. (a) Name three agricultural food processing industries in Kenya (3mks)
(b) State two ways on how government of Kenya can help in curbing pollution caused by industries (2mks) (c) Explain four factors that have contributed to the development of iron and steel industry in the Ruhr Region of Germany (8mks)
      (d) (i)State three benefits that can be derived from rural electrification (3mks)

(ii)   Explain two likely effects of recent oil discovery to the economy of Kenya
(4mks)   (e) Your class visited a Jua Kali industry in the near by town
(i) State three reasons why you were required to carry out a pre-visit
(3mks)   (ii) State two problems facing Jua Kali artisan in Kenya you were likely to identify
(2mks)

9. (a) State five reasons as to why it is necessary to carry out regular population census   (5mks)

(b) State three cultural practices that contribute to high birth rate in Kenya   (3 mks)

(c) Outline three effects of rural -urban migration on the rural areas   (3mks)

(d) Explain four problems associated with high population growth rate in developing countries   (8mks)

(e)   Describe three ways in which the population of Kenya differs from that of Sweden   (6mks)

10. (a) (i) Differentiate between the term transport and communication   (2 mks)

(ii) Name two modern methods of communication beside cell phones   (2 mks)

(b) State three reasons why River transport is less developed in Africa   (3 mks)

(c) Explain two reasons why containerization has become popular at the port of Mombasa   (4 mks)

(d) Explain two factors that hinder the development of railway lines among African countries   (4 mks)

(e)   Give three ways in which the Great Lakes and St. Lawrence has benefited the economies of U.S.A and Canada.   (3mks)

(f)   State three reasons why Kenya experiences an unfavourable balance of trade   (3mks)

(ii) State four ways through which Kenya will benefit from the renewed East African Co-operation   (4mks)

KIRINYAGA WEST SUB COUNTY EFFECTIVE "40"
GEOGRAPHY
MARKING SCHEME
312/1
Paper 1

1   (a) what is physical Environment

 These are natural features which were not created by human beings but influences his activities (2mks)

(b) State three reasons why it is important to study Geography

        It helps to develop skills

        It helps learners to understand and appreciate different types of environments

        It encourages international awareness and co-operations

        It helps learners to appreciate importance social values

        It makes learners understand the importance of proper conservation of natural resources.

 It is career subject

        It makes learners to utilize time efficiently

        It enables learners to explain how the earth and other physical features came into existence
        (First 3 x 1 = 3mks)

2   (a) Describe the characteristics of the following layers of the earth structure
        (i) Lithosphere/crust

 It is made up of two layers /sial and sima

 Sial is the upper layer and consist of silicon and Aluminium

 It extends between 6-80km

 Sima consists of silicon and Magnesium

 Sial mainly consist of granific rocks

 Sial has a density of between 2.65 to 2.70gm/cc

 Sial mainly consist of basaltic rocks

 Sima has density of between 2.7 to 3.0 gm/cc

 Sima is some how flexible   (Any 3 x 1= 3mks)

(b) Core

 It is divided into inner and outer core

- Outer core is mainly made of iron and nickel
- Inner core is mad up of iron
- Density of the core ranges from 12gm/cc to 17g/cc
- It has a radius of about 3450km
- The inner core is in solid state   (First 3 x 1 = 3mks)

3   (a) What is a lake?

- It is a body of water which occupies a depression on the earth surface   (2mks)

(b) State three reasons why Lake Naivasha is a fresh water lake.

- It has underground outlet to Indian Ocean
- It is located in an area with moderate temperature which reduces the rate of evaporation to enhance deposition of precipitates
- It receives a lot of fresh water from rivers which ends in it
- The Lake bed is mad up of rocks from recent volcanic eruptions which conceals the salty rocks beneath

(Any first 3 x 1 = 3mks)

4   (a) What is faulting?

- It us fracturing/ cracking of the brittle rocks of the earth crust due to tectonic forces   (2mks) (b) Name three features formed through faulting
- Fault scarps
- Fault steps
- Fault blocks /block mountains/horst mountains
- Tilt blocks
- Rif valleys   (First 3 x 1 = 3mks)

5. (a) Annual range of temperature
          16º - -4 = 20ºc   (1mk)

(b) Describe the climate of the above station

- Hottest months are July and August while coldest month is January
- The station experiences moderate to low temperatures
- Annual range of temperature is high 20ºc
- Total annual rainfall received is 1479mm
- The station experiences high rainfall throughout the year
- Wettest month is July with 188mm of rainfall while driest month is February with 78mm of rainfall
  Most of the rainfall is experienced during the warm months of –June, July and August   (Any 3 x 1= 3mks)

  SECTION B

6   (a) Latitudinal extent of the area covered by the map

- From 1º 15"5 to 1º 03"55   (2mks)

  (ii) Symbol representing relief in the area covered by the map

- Use of contours
- Use of trigonometrically station   (2mks)

  (iii) Physical feature found at gridReference 035830 Out crop Rock   (1mks)

(b) (i) on the graph paper

  (ii) on the graph paper Marking of this section   Rectangle right shape   1mk
          River Ikoo   1mk
          Steep sloping area   1mk
      Water pipeline   1mk
      Total   4mks

(c) (i) Length of the dry weather road
      9300 metres + - 100metres = 9200 to 9400metres   (2mks)

  (ii) Describe the relief of the area covered by themap

☐ The highest altitude of the area covered by the map is 1530 metres above sea level while the lowest is 660 metres above sea level.

☐ The general slope of the land is from west to East

☐ Most of the areas t

☐ owards the East of Easting 08 have gentle slopes

☐ Areas of the West if Easting 99 and Northing 79 have gentle slopes
Most of the areas South of Northing 78 and West of Easting 06 have steep slopes
There are several river valleys which dissect the area

☐ There are several hills e.g Hills at Kyoma

☐ There are several ridges . The ridge at Nzia

☐ The area around Mutito have low gradient is flat . (Any five points on relief   (1 x 5 = 5mks)

(d) Describe the drainage of the area covered by the map

☐ There are many permanent rivers in the area covered by the map
The general direction of the flow of the rivers is from North West to South East
☐ River Ikoo is the main river.

☐ Most rivers from dendritic drainage pattern

☐ Most of the rivers originate from steep slopes toward the west

☐ There are several reservoirs behind some dams on some rivers
Rivers Vinda and river Ikoo are lengthy   (Any 5 points x 1mark = 5marks)

(e) Citing evidence from the map give two functions of Mutito Township   (4mks)

☐   It is a trading centre because of presence of shops

☐   It is an educational centre because of presence of schools

☐   It is an administration centre because of the presence of chiefs office /Do

☐   It is a communication centre because of the presence of a post office

☐   It is a medical centre because of the presence of health centre

☐   It is a transport centre because of presence of roads

☐   It is a justice dispensing centre because of presence of a court house 7 (a) What is a rock

   (i)

☐   It is a natural occurring substance made up of one or more elements and made up of one or more elements and forms part of the earth's crust   (2mks)

   (ii) Give two types of intrusive igneous rocks

☐   Granite

☐   Diorite

☐   Syenite

☐   Gabbro

☐   Peridotite   (Any first 2 x 1 = 2mks

   (iii) State three characteristics of sedimentary rocks   (3mks)

☐   They are non, crystalline/do not have crystals

☐   They are laid down in layers /have stratas

☐   They have bedding planes

☐   Some contain fossils"

☐   They formed through hardening of sediments which were derived from other rocks (Any 3 x 1 = 3mks   (b) Metamorphic equivalents

Original	Metamorphic
Granite	Gneiss
Sandstone	Quartzite
Clay	Slate
Limestone	Marble

(4 x 1 = 4mks)

(c) Describe three ways through which original rocks turns into metamorphic rock / Thermal Metamorphism" .This is whereby original rocks comes into contact with high temperature especially during vulcanicity .The rock change in physical characteristics Dynamic metamorphism .

This is whereby the original rocks are subjected to great pressure resulting from earth movements which causes realignment of the minerals leading to physical changes is rock appearance

Thermal – Dynamic metamorphism-

This is whereby the original rock is subjected to a combination of great pressure and intense heat. This causes realignment of minerals in the rock causing changes in physical and chemical characteristics

3 x 2 = 6mks d)

(i) Methods of data collection

☐ Carrying out observation

☐ Carrying our experiments

☐ Reading from geological sources   (First 2 x 1 = 2mks)

(ii) Two objectives of the study

☐ To identify the types of rocks around the school compound   ☐ To establish the mineral composition of the rocks

☐ To investigate the relationship between rocks and major landforms found in the area. (First 2 x 1 = 2mks) (iii) Reasonwhy it would be necessary to carry a geological hammer.

- For breaking the rocks in order to get rock samples

(iv) Three problems likely to be encountered

☐ Danger of being bitten by poisonous snake/spiders/scorpions/wasps

☐ Ina accessibility of some areas due to thick vegetation /steep slopes

☐ Adverse weather conditions which may affect the progress of the field study

☐ Accidents due to slipping /falling   (First 3 x 1= 3mks)

8 (a) What is a fault?

- A fault is a fracture/crack on the rocks of the   earth crust   (2mks)

(ii) Two rift systems in Africa

- The Great Rift Valley of Eastern Africa

- The Benue Rift Valley

(b)   Formation of the Rift Valley through compressional forces
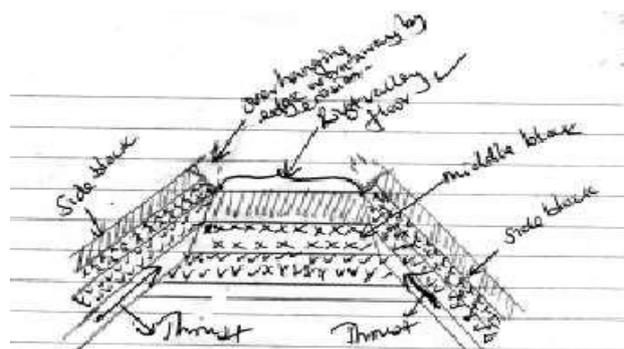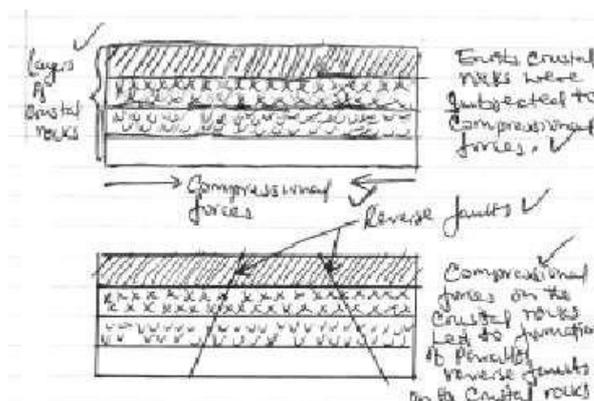
☐ The side blocks where pushed over the middle block by compressional forcesOverhanging edges were worn away by erosion. The surface of the middle block became the floor of the rift valley

Diagram 4mks Text 4mks = 8mks

(i) <u>Three features associated with folding</u>

☐ Rolling plains

☐ Ridge and valley landscape

☐ Fold mountains

☐ Inter Montane Plateaus

☐ Inter Montane basins   (First 3 x 1 = 3mks)

(ii) <u>Significance of faulting</u>

☐ Faulting leads to discounting of the land leading to disruption of transportation lines such as roads /railways/pipelines

☐ Faulting may cause a river to change its course leading to shortages of water downstreams

☐ Faulting may lead to subsidence of land leading to loss of life and destruction of property

☐ Faulting may lead to formation of depressions which are filled with water forming lakes . Water of those lakes can be useful in terms of fishing /irrigation etc

☐ Faulting may expose hot water due to vulcanicity beneath . The hot water/steam can be used to generate Eco-thermal power

☐ Faulting may result in good scenery which attracts tourists who brings in foreign exchange "

☐ Faulting may lead to exposure of minerals making it easy to mine them

☐ Faulting may expose underground water in form springs which can be a source of clean water for domestic use

(Any 5 x 2 = 10mks)

9   (a) (i) What is mass wasting?

☐ Mass wasting us the downward movement of weathered materials down the slope under the influence of gravity (ii) Explain three factors which influence the rate of movement of material down the slope .

☐ Nature and weight of the materials Layers of deep thinly bedded materials result in rapid movements

☐ Amount of water in the materials –Materials which are saturated with water moves faster than dry materials

☐ The angle of the slope movement is faster on steep slopes than on gentle /pain slopes

☐ Climate – Steep areas which experiences heavy rainfall experiences massive landslides/areas with little rainfall experiences slow movement of materials because they lack lubrication by water

☐ Vegetation cover- plants such as grasses/shrubs/trees hold rock materials together thereby reducing movement on the surface while bare surfaces are more prone to rapid movement of the materials because the materials are loose

☐ Human activities – Some human activities such as cultuvational roads constructions /vibrations from trains triggers movement of materials down the slope

☐ Tectonic movement. Natural occurrences such as earthquakes and volcanic eruptions triggers movements eg landslides

(First 3 x 2 = 6mks)

(iii) State three effects of soil creep

☐ Leads to downward bedding of electric poles/fences/trees

☐ Can lead to collapsing of walls due to weight exerted by soil

☐ Leaves the soil bare and exposed after most of the soil moves downwards

☐ It leads to accumulation of soil particles at the base of the slope   ☐   It leads to retreat of the slope

☐ It may cause the rock outcrops to bed downwards   (First 3 x 1 = 3mks)

(b) Effects of landslides

☐ Landslides makes the slopes barren and exposed to agents of erosions

☐ Landslides causes loss life and destruction of property

☐ Landslides at times forms barrier across a river valley leading to formation of lakes on the upper side of the river valley

☐ Landslide can force a river to change its course/ direction when it get blocked by debris   (First 3 x 2 = 6mks) (c) Reasons for seeking permission

☐ To enable the administration to account for your whereabouts

☐ To enable the administration to make arrangements for lunch , transport etc

☐ To enable the teacher to come up with suitable date for the study   (First 2 x 2 = 4mks)

Methods of data recording

☐ Drawing sketch diagrams   -   ☐   Writing notes

☐ Taking photographs

☐ Taking measurements   (First 2 x 2 = 4mks)
    Follow up activities
☐ Writing a report
☐ Displaying photographs
☐ Giving a lecture
☐ Processing the photographs
☐ Holding class discussion   (First 3 x 1 = 3mks)

10
(a) (i) Sources of groundwateR
☐ From precipitation/rainfall
☐ From meltwater
☐ See page from seas/lakes/oceans
☐ From magmatic water   (First 3 x 1 = 3mks)
    (ii) What is a water table? \
A water table is a level of groundwater below which all available space is filled/saturated with water (2mks) " (iii)
    Diagram
    A- Non saturation zone
    B- Soil water belt
    C- Permanent water-table
    D- Permanent saturation zone   (4 x 1 =4mks)
(b) Conditions necessary for formation of an artesian weels
☐ Presence of two impermeable rocks which sandwich an acquifer
☐ Presence of an aquifer which out crop in rainy area/lake
☐ Presence of an aquifer which dip from a region of water intake with rock layers forming a synchline /basin
☐ A well whose mouth is lower that the intake area   (First 3 x 1 = 3mks) (c) (i)
    Surface features formed in limestone areas
☐ Uvalas
☐ Dolines
☐ Swallow holes/sink holes
☐ Grikes
☐ Clints
☐ Polje
☐ Dry valleys
☐ Gorges   First 3 x 1 = 3mks)
    (ii) Reasons as to why limestone areas have no surface drainage
-     It is because rivers/rain water enters into the joints/swallow holes before emerging downstream where there is no limestone
           (1mk)
(d) (i) Formation of Limestone Pillar
☐ Rain water dissolves carbon (Iv) oxide forming weak carbonic acid
☐ - The weak carbonic acid reacts with limestone rocks forming calcium hydrogen carbonate which is in solution form.
☐ The calcium hydrogen carbonate enters through joints in Limestone rocks up to the roof of the caves beneath.
☐ Some of the calcium hydrogen carbonate solution hangs on the roof of the caves where evaporation takes place leading to formation of calcium carbonate crystals
☐ A column of calcium carbonate gradually grows downwards. The column is called stalactile
☐ Some drops of calcium hydrogen carbonate drop on the floor of the cave where evaporation takes place leaving behind calcium carbonate deposits which grows upwards leading to formation of stalagmite
☐ A stalactite and a stalagmite may meet if they grow towards each other forming the limestome pillars   (6mks) d   (i)
    Significance of features in limestone areas
☐ Surface and underground features attracts tourists who brings in foreign exchange
☐ Limestone surfaces with grikes and clints discourages settlements because the surface is rugged.
☐ Limestone blocks are used for building houses and also are raw materials which is used in manufacture of cement
           (First 2 x 2 =4mks)

KIRINYAGA WEST SUB COUNTY EFFECTIVE "40" EXAMINATION 2015
GEOGRAPHY
PAPER 2
MARKING SCHEME
312/2

1(a) State two features of pastroralism in Kenya
☐ Cattle are kept as a sign of wealth
☐ They are reared for the purpose of paying bride price
☐ There is uncontrolled breeding and large herds are kept
☐ Land on which animals are kept is owned by community
☐ Pastrolists do not have permanent sheller they keep moving in search of water and pasture
☐ Livestock is kept mainly for meat and blood ☐ Low quality of animals are reared
☐ The livestock is sickly, weak and unhealthy   (Mark the 1st 2 x 1 = 2mks)

(b) State three probles facing dairy farming in Kenya
☐ Importation of dairy products by traders interferes with the market for locally produced dairy products
☐ Farm inputs are very expensive. This has minimised mechanization of dairy farming in the country
☐ Prolonged period of drought lead to scarcity of grass and water hence affecting the health of animals resulting to low yields .
☐ Small scale dairy farms face stiff competition from other cash crops e.g tea, coffee ☐ Dairy cattle face the risk of cattle disease.
☐ Mis- management of dairy co-operatives at the grass roots results to delayed payments. This kills the farmer"s morale
☐ Majority of the roads are impassable during the rainy seasons in some major dairy farming area"s like Nyandarua county   (Mark the 1st 3 x1 = 3mks)

2   (a) Name two methods used in preserve fish
☐ Salting
☐ Sun drying
☐ Smoking
☐ Canning
☐ Freezing   Any 2x 1 = 2mks

(b) Give three reasons why it is important to encourage fish farming in Kenya
☐   To help meet the demand for food
☐   To assist in conservation of rare endangered species
☐   It allows use of land and water resources
☐   It is free from inter territorrial conflicts and disputes
☐   Fish exported earn foreign exchange
☐   To create employment opportunities ☐ Fish farmers earn income
☐   It facilitates scientific research   (mark the 1st 3 x 1 = 3mks)

3   (a) Differentitate between afforestation and reafforestation
    Afforestation is the process of plating trees where non existed while reafforestation is the act of planting trees in areas where they have been cut planting of trees to replace those that have been cut   2mks

(b) Name three reasons why hardwood tree species in Kenya are danger of extintion
☐   High demand for hard wood has led to over exploitation
☐   Population pressure on land has led to increased cutting of trees to provide land for farming and settlement ☐ The time taken for the hardwood trees to mature does not match the rate at which they are being exploited. ☐ Frequent fire outbreaks caused by honey harvesters and charcoal burners. Leads to a lot of destruction
                                                          Mark the 1st 3 x 1 = 3mks

4   (a) Name two factors influencing the occurence of minerals in the earth"s crust
☐ Vulcanicity

- Sedimentation
- Metamorphism
- Evaporation
- Erosion   Mark the 1st two 2 x 1 = 2mks

(b) State three negative effects of mining on the environment

- The dumping of rock waste have led to the loss of biodiversity /destruction of natural vegetation
- It leads to land dereliction. It causes ugliness of the landscape /waste of agricultural lands open pits are health and accident hazards
- It causes pollution. During mining harmful gases are released into the atmosphere contaminating the air /harmful mineral wastes may be washed into rivers causing danger to marine life / Noise pollution through blasts
- Mining disrupts the water table which may lead to shortage of water
- Soil erosion/Degradation of the soil   (Mark the 1st 3 x 1 = 3mks)

5   (a)   State two major causes of noise pollution in urban centres

- Repeated hooting from vehicles
- Large flying aircrafts
- High- pitch music from night clubs and vehicles
- Machines that produce loud noise in factories
- Excessive loud laughter , singing and quarrelling by human beings
- High intensity sounds produced by some animals like dogs and donkeys   (mark the 1st 2 x 1 = 2mks)

(b) State three problems associated with wind storms

- They cause destruction of buildings property and infrastructures such as electric wires.
- They cause massive loss of human life
- They cause severe soil erosion especially in the arid and semi arid areas.
- They cause destruction of crops and vegetation
- They cause lose of direction by desert travelers when they change direction abruptly
- They reduce visibility when they carry a lot of dust
- They spread air borne diseases and cause breathing problems
- -Windstorms (e.g tropical cyclones) bring destructive heavy rainfall
- Dry windstorms cause dry and arid conditions especially on the leeward side of mountains ☐ They disrupt traffic flow
- They may enhance spread of fires which may destroy property and vegetation (mark the 1st 3x 1 = 3mks)

6   (a)

A COMPARATIVE BAR GRAPH SHOWING THE NUMBER OF TOURISTS WHO VISITED EAST AFRICAN COUNTRIES BETWEEN 2010 TO 2012
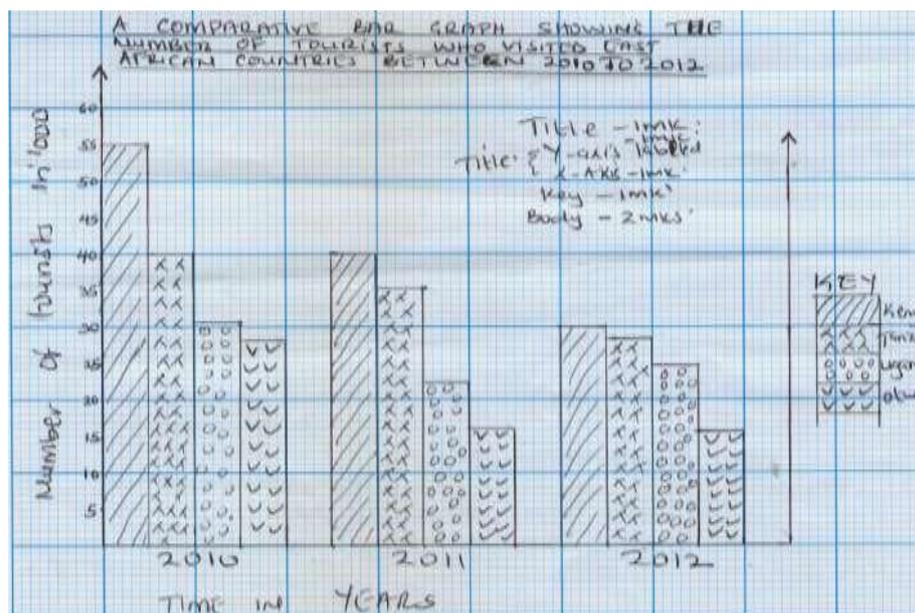
(ii) State two advantages of using comparative bar graph to represent geographical data

☐ Values in the same group can be compared easily

☐ The individual contribution made by variables in each group is easily identified

☐ Bars gives a good visual impression of the individual contribution made by different variables ☐ They are easy to read and interpret

☐ They are easy to draw/construct   (Mark the 1st 2 x 1= 2mks)

b   (i) State two reasons for the decline of tourists who visited Kenya from 2010 - 2012

☐ The decline could have been due to insecurity caused by Al-shabab terrorist along the coast of Kenya

☐ There could be poor advertisement of Kenya tourism attraction sites abroad / Negative publicity

☐ Other countries could have attracted tourists destiny to Kenya with cheaper charges and improved accomodation

(Mark the 1st 2 x 1 = 2mks)

(ii) State three problems associated with tourism in Kenya

☐ Spread of diseases, some tourists engage in immoral activities which encourage the spread of diseases such as sexually Transmitted infections and HIV/AIDS

☐ Some of the tourists traffic drugs and encourage the youths to use and abuse drugs .

☐ The influx of large groups of tourists in the game parks disrupts the wild animals especially when the van drive to the spots where the animals are resting

☐ It has led to an increase in school outs arts as many young people become twilight girls and beach boys

☐ A peing of foreign culture hence neglecting our culture

☐ Some tourists may distabilize the political situation in a country

☐ Tourists who engage in fishing as a sport have led to the reduction of marine life   (mark the 1st 3 x 1 = 3mks)

c   (i) Name two game reserves found in the Rift Valley of Kenya

☐ Samburu National Reserve

☐ South Turkana National reserve

☐ Kerio valley National reserve

☐ Laikapia National reserve

☐ Masai Mara National reserve

☐ Lake Bogoria National reserve

☐ Lake Kam narok National reserve   (mark the 1st 2 x 1 = 2mks)

(ii) Explain three problems experienced by the Kenya Government in the effort to conserve wildlife

☐ Illegal hunting/poaching of wild life threatens the conservation efforts . This leads to the extinction of some species of animals

☐ Some parks are overpopulated with certain species of animals beyond carrying capacity eg Tsavo National park have excess elephants this leads to overgrazing the pasture and scrubs

☐ Frequent drought experienced in some of the National parks and reserves leads to loss of animals through starvation and death . This reduces their population

- Rapid human population growth leads to the encroachment of game parks and reserves in search of land for settlement and farming . This slowly reduce land occupied by wild life
- Pollution of the environment leads to death of wild animals. Some tourists who visit"s the game parks carelessly throw away the litter cans, plastic papers in the parks. Some of the animals feeds on these waste materials which kills them.
- Effluents from factories into the lakes can lead to death of marine animals
- Fire outbreaks destroy wildlife . During dry months fire easily starts in the parks this destroy the vegetation which is the habitats of the animals. Some are forced to migrate and others are killed
- Human - Animal conflict , when animals stray into the people farm"s and destroy their crops or kills livestock they revenge by killing those animals this is because , the compensation from KWS is too little
- In adequate capital . The government lack adequate financial resources required for the improvement of the game park"s and deployment of adequate personnel to take care of the wildlife
- The roads and tracks built in the game parks have effects on the ecosystem and behaviour of animals . Toursits scare away the animals when they travel near them this changes their habits (mark the 1st 3 x 2 = 6mks)

(b)State four differences between tourism in Kenya and Switzerland

- Kenya is rich in traditional culture due to the different ethnic communities living in the country. Switzerland has fewer ethnic communties and therefore less variety in culture
- Kenya has sea front where, water sports such as yatching, water surfing are practised . Her beaches are sunny which makes it ideal for sun bathing. Switzerland is land locked hence it has no access to beaches and its associated sports
- The abundant of marine life in the marine parks of Kenya is a tourist attraction. Switzerland have no sea front hence this type of marine life lacks .
- Kenya"s climate is warm through out the year while Switzerland experiences warm summers and cold winter"s
- Kenya"s only mountain with snow is too high and steep and therefore unsuitable for skiing . Switzerland has large areas of smooth slopes which are covered with snow during winter in which skiing takes place. Kenya has no winter sports .
- Kenya boasts of a landscape with a variety of physical features such as the Rift Valley , lakes , mountains and plains but the main physical feature in Switzerland is the ALPS mountain
- Kenya is rich in variety of tropical flora and fauna e.g elephants , lions, cheetah, giraffee and rhino . Switzerland lacks similar wildlife   Mark the 1st 4 x 1 = 4mks

7

a   (i) State three physical conditions that favour coffee growing in the central highlands of Kenya

- The highlands experience high/well distributed rainfall through out the year. / High raifall of about 1000-2000mm which is well distributed through out the year. □ Deep fertile, well drained , volcanic soils
- The area experience cool to warm conditions through out the year./ The temperatures range from 140c - 260c through out the year.
- The land was gentle slopes that allow good drainage well drained soils
- High altitude ranging between 910m to 2100m above seal level   (mark the 1st 3 x 1 = 3mks
         (ii) Describe the stages involved in coffee production from picking to
    marketing □ The ripe /deep red berries are picked by hand .
- The harvested berries are carried in baskets/sacks to the factory .
- The berries are sorted out to remove the unripe/diseased
- The berries are graded into grade A and B
- The different grades are weighed
- Berries go through a machine that removes the outer
- covering /pulp
- The beans are washed and then sun dried for about a week
- The husks are removed and the beans winnowed
- The beans are sorted out and graded according to size and quality

- The beans are roasted at temperatures of about 100^0c The beans are ground into powder ready for sale
- The powder is packaged ready for sale (6mks) b. (i) Mention one cocoa growing areas in Ghana
- Kumasi
- Sunyani
- Koforidua
- Ho
- Obuasi (Mark the 1st 1x1=1mk)

(ii) State four problems that are faced by cocoa farmers in Ghana

- Pests like capsid bug and mealy bug destroy the crop leading to low yields
- Diseases such as the swolen disease attack the tree shoots and black pod disease affects the pods hence reducing the yields
- Fluctuation of prices in the world market disourage the farmers
- The strong harmattan winds break the branches and cause premature ripening of the pods .
- In adequate labour during harvesting period
- In some of the growing regions the roads are impassable during the rainy seasons. This make it difficult for farmers to transport their crops in time (mark the 1st 4 x 1 = 4mks)

c (i) State three physical conditions that favour large scale sugarcane farming in Kenya ☐ High rainfall 1200mm - 1500mm well distributed through out the year

- High temperature ranging from 20^0c - 27^0c through out the year
- Gentle sloping/undulating landscape terrain which allows for mechanization
- Well drained fertile black cotton soils
- Dry and sunny harvesting spell during the year (mark the 1st 3x 1 = 3mks)

c (ii) Your class visited a sugar factory for a field study on sugar cane processing (a) Outline four stages for sugar processing that the class may have observed

- Weighing of the cane
- Washing the cane by spraying
- Chopping of the cane
- Crushing of the cane
- Boiling
- Filtering
- Crystalization
- Grading
- Packing /bagging of sugar

(b) Name two by-products of sugarcane that the class may have identified during the study

☐

Molasses

☐ Bagasse   (Mark the 1st 2 x 1 = 2mks)

(c) Give two reasons why a working schedule was necessary during the field study

☐ It reduces the tendency to waste time

☐   It provides us with a basis for evaluation of the field work exercise while in progress

☐   It gives an estimate of the over all time with regards to the fieldwork

☐   It gives ample time to each activity

☐   It provides a systematic frame work thus ensuring that the researcher avoids irrelevance and remains within the scope of study   (mark the 1st 2 x 1 = 2mks)

8 (a) Name three agricultural food processing industries in Kenya

☐   Tea processing

☐   Coffee processing

☐   Milk processing

☐   Meat processing /canning

☐   Grain milling

☐   Sugar refining

☐   Brewing and soft drinks

☐   Fruit canning/processing

☐   Cooking fats/oil refining

☐   Vegetable processing /canning   (mark the 1st 3x 1 = 3mks

(b). State two ways on how government of Kenya can help in curbing pollution caused by industries

☐   Enacted laws should be enforced and the culprits to be arrested and charged in court

☐   Industries should ensure that their effluent is treated

☐   before it is discharged into the environment

☐   Recycling wastes in order to reduce the industrial waste turn over

☐   There should be a control of smoke and fumes emission   (mark the 1st 2x1=2mks)

(c) Explain four factors that have contributed to the development of iron and steel industry in the Ruhr Region
of Germany

☐   Availability of coal, iron ore and limestone from the Rhine valley provided raw materials needed in the Industry.

☐   The Ruhr regions is centrally located in Europe . It has direct connection with all parts of Europe by water, railway, air and road

☐   Availability of capital . Capital accrued from other industries e.g coal is invested in the iron and steel industry . Old rich companies also provide ready capital for development in the region eg. The Krupp group.

☐   Availabilty of market. Products from iron and steel industries in Ruhr Region have a ready market within the locality and in other parts of the world .

☐   River Rhine/River Ruhr and others provided water

☐   required for cooling machines in the industry

☐   The local population had acquired skills on iron working/availabilty of local skilled labour and this formed the foundation of iron and steel industry

☐   Coal from Ruhr region and imported petroleum provided power required in the industry

(Mark the 1st 4 x 2 = 8nks) d   (i)
State three benefits that can be derived from rural electrification

☐   It would encourage selting up of industries in the rural areas hence stimulating decentralization of industries

☐   It would attract /improve social amenities in rural areas reducing the need for people to move to urban centres

☐   It would reduce excessive cutting down of trees as electricity would be available as an alternative source of energy for domestic use .

- ☐
- ☐
- ☐ More people would invest in rural areas which would lead to higher standards of living
- ☐ It would enhance security in rural areas   (mark the 1st 3x1 = 3mks)

(ii) Explain two likely effects of recent oil discovery to the economy of Kenya

- ☐ The prices of oil products such as petrol, diesel, kerosene and Bitumen would reduce this will promote the development of other sectors e.g transport which relies on oil .
- ☐ Petroleum exploration, mining and processing will create employment to many people in the country. This will raise their standard of living .
- ☐ Growth of towns. Towns will develop where mining and processing of petroleum is carried out
- ☐ Development of infrastructure. The revenue which will be obtained from oil will be used to establish modern transport infrastructure e.g. roads

  Industrial development . Petroleum production would promote the growth and expansion of oil related industries e.g. fertilizer pharmaceuticals and plastics

  Promotion of agriculture . Oil exploration is being done in arid or semi arid areas of Kenya. Income from oil would be used to establish irrigation programmes and agricultural research. This will help to promote agricultural output
- ☐ Oil products can be exported to other countries hence earning the country foreign exchange

(mark the 1st 2 x 2 = 4mks) e . Your class visited a jua kali industry in the near by town:-

(i) State three reasons why you were required to carry out a pre-visit

- ☐ To be able to formulate appropriate objectives for the study
- ☐ To be able to decide on the appropriate methods of data collection
- ☐ To seek permission for the visit
- ☐ To prepare a work schedule
- ☐ To determine appropriate tools for the study
- ☐ It help to familiarize with the area of study
- ☐ To be able to estimate the cost of the study
- ☐ To find out possible problems likely to be experienced during the field study   (mark the 1st 3 x 1 = 3mks)

(ii) State two problems facing Jual Kali artisan in Kenya you were likely to identity

- ☐ Competition from cheap imported goods
- ☐ Competition from well established factory manufacturers . This reduces the sales .
- ☐ A rise in the cost of the raw materials this increases the prices of goods. It limits growth in the industry .
- ☐ In adequate capital to invest in the sector . Low productivity level caused by in adequate labour for the particular products.
- ☐ Exploitation by middle business people who offer very low prices
- ☐ Low purchasing power due to low income earnings by local people
- ☐ In adequate advertisement on available goods.   (mark the 1st 2 x 1 = 2mks)

9   (a) State five reasons as to why it is necessary to carry out regular population census

- ☐ If there is a large percentage of a population is
- ☐ composed of the youth, the government has to plan on how to avail employment opportunities
- ☐ It reveals current trends of fertility and mortality rate will help to calculate population growth rate
- ☐ It provide information on trends and levels of mortality and fertility which help the government to provide basic facilities e.g. food, schools and hospitals
- ☐ To assist the government in making decisions on the division of new administrative areas the creation of new counties and sub counties is based on census figures
- ☐ It shows the composition of the population in terms in sex, age and regional distribution hence reveals the dependency ratio

- ☐
- ☐
- ☐ It helps the government in planning for food production and distribution
- ☐ It helps to reveal the occupation of people which helps in establishing the level of employment and estimation of the level of taxation .
- ☐ Helps in planning urban growth and the necessary facilities needed such as water, roads, health and electricity (Mark the 1st 5 x 1 = 5mks)

State three cultural practices that contribute to high birth rate in Kenya

- ☐ Sex preference some couples consider their births incomplete without a son. If their first children are girls a couple continue"s to get more children with the hope of getting a son . In the process they end up getting a large family
- ☐ The need for more children . Children are seen as old age security and they provide labour for work. The belief that the more children the man has the more respect he commanded in the society
- ☐ Polygamy with many wives a man can have many children . Polygamy still prevail in some areas hence contributing to the high population growth rate.
- ☐ Early marriages when women get married early then the rate of population.
- ☐ Increase is bound to be high due to increased total fertility rates
- ☐ Naming of relatives. The naming of children from the man"s and woman"s side alternately among communi ties like the Kikuyu"s results in large family (Mark the 1st 3 x 1 = 3mks)

(c) Outline three effects of rural - urban migration on the rural areas

☐ The areas get depopulated and the rate of population growth goes down.

When a large number of able-bodied men move from rural areas leaving the aged behind the areas become under developed

Migration from these areas leads to labour shortage that results in reduced food production hence food shortage. This is because productive land are left uncared for or un cultivated

☐ Migration may cause a population imbalance that is in the female -male ratio: This lowers the fertity rate

(Mark the 1st 3 x 1 = 3mks)

d. Explain four problems associated with high population growth rate in developing countries

- ☐ The government is unable to provide adequate social amenities e.g. health, recreational and educational facilities leading to overcrowding /strain on the few amenities
- ☐ A high population growth rate creates problems of land fragmentation as it is subdivided among family ☐ member. This leads to an increase of squatter,
- ☐ landlessness and deforestation Opportunities available for employment do not increase at the same rate as the population . This leads to a situation where there are many unemployed skilled and unskilled people. These can easily engage in crime
- ☐ The large number at youthful population create a high dependency ratio which causes slow economic growth
- ☐ The high demand for food caused by the high population growth rate has led to food shortage. This makes population under nourished and easily attacked by disease
- ☐ The high population in towns has made transport inadequate and expensive. This results to congestion at commuting points
- ☐ More land is likely to be used in the production of food crops at the expense of cash crops hence reducing the country"s foreign exchange Mark the 1st 4x2=8mks

e. Describe three ways in which the population of Kenya differs from that of Sweden

- ☐ In Kenya there is high average population density of about 40p/km2 while in Sweden there is low average population density of about 17p/km2.
- ☐ In Kenya there is high population growth rate while in Sweden there is very low population growth rates almost zero growth .
- ☐ In Kenya there is low life expectancy of about 59 years while in Sweden there is high life expectancy about 76.7yrs

□

□

□ In Kenya three is high dependency ratio while in Sweden there is low dependency ratio

□ A high percentage of population in Kenya live in rural areas while in Sweden most people live in urban areas

(6mks)

10 (a)(i) Differentiate between the term transport and communication

Transport is the movement of goods and people from one place to another while communication is the transmission of ideas of information from one person to another or from a group to another   (2mks) (ii) Name two modern methods of communication besides cell phones

   □ Newspaper, magazines and journals

   □ Radio and television

   □ Postal and courier services

   □ Facsimile (fax)

   □ The internet   (Mark the 1st 2 x 1 = 2mks)

(b) State three methods why river transport is less developed in Africa

□ Most river"s are seasonal and therefore the water levels fluctuate making it hard for the vessels to sail

□ Presence of waterfalls and rapids along the river courses making it difficult

□ Most rivers are short and shallow for vessels to navigate

□ There is high siltation in the lower course of most rivers making their channels shallow

□ Some of the river"s are infested by crocodiles and hippo"s which disrupt navigation

□ Some river"s have floating vegetation or swamps which make the navigable channels very narrow

□ Some rivers flow through areas or low economic value e.g. the Congo forest, Sahara and Karahari deserts. These regions have limited human activities due to low population

□ Some of the rivers contain huge rocks and boulders on their beds making it difficult for vessels to sail

□ Some rivers have shallow water due to a rugged \

□ landscape therefore cannot accomodate large volumes of goods **(mark the 1st 3 x 1 = 3mks)** c. **Explain two reasons why containerization has become popular at the port of mombasa**

□ Container"s are sealed at the point of origin

□ This minimises the possibility of theft or damage of goods during shipment

□ Container"s are strong hence offers protection to fragile goods

Usage of standard containers ensures there is more efficient utilisation of space that there would be if thegoods were to be placed without any particular form of packing

Containers save time and labour at the loading and off loading , this is because goods are packed in one parcel

□ The use of machines for loading and off loading makes this means of transport more convinent

□ The movement of containers in and around the parts

□ of relatively easy . This is because they are fitted with locks which assist in their handling

(mark the 1st 2 x 2 = 4mks)

d. **Explain two factors that hinder the development of railway lines among African countries**

□ Different railway gauges. Countries have different railway gauge"s which make"s movement of trains from one country to another impossible

□ Low trade flow . There is very little trade between the different countries because they produce similar goods.

□ Political differences /political ideologies. The different

□ political ideologies in the various countries hinders collective efforts to construct railway lines with the same gauge

□ In adequate capital. Many African countries are poor

□ unable to afford to build railway lines

-
-
- Unproductive regions . Many parts of Africa are arid or semi arid making it uneconomical to construct railway lines in such areas.
- Physical features . Some areas are covered by mountains and rift valleys with steep slopes which would make the construction of railway line difficult
- The countries were colonized by different European powers who constructed railways to transport raw materials from the interior to the port within their own colonies **(Mark the 1st 2x2=4mks)**

(e) **Give three ways in which the Great lakes and St. Lawrence has benefited the economics of U.S.A and Canada**

- It provides cheap means of transport for both imports and exports thus encouraging internal and external trade
- Several dam‟s have been constructed to generate hydro-electric power which is supplied to homes and industries
- Many people have been employed in the project since it began as engineer‟s, supervisors and in the transport industry raising the standards of living of the people in the area
- The seaway has some of the most beautiful and fascinating sceneries e.g. Miagra falls which attract may tourist which generate income in the region
- It has led to growth of ports and towns along its course. These have become local points for various economic activities
- Due to accessibility to raw materials , there has been extensive industrial development in the area
- The project has boosted agricultural activities along the sea way . This helps to supply food to the urban population along the seas way **(Mark the 1st 3x1= 3mks)**

F (i) **State three reasons why Kenya experiences an unfavourable balance of trade**

- Kenya exports mainly agricultural raw materials which are of low value and imports manufactured goods which are of high value
- The agricultural goods exported from Kenya face stiff competition in the world /imposed quota systems in the world market which leads to reduce sales and less earnings
- Semi processed goods e.g coffee once exported fetch low prices
- Some of the goods exported are of low quality hence generating low earning **(mark the 1st 3x1=3mks)**

(ii) **State four ways through which Kenya will benefit from the renewed East African Co-operation**

- The expanded market will attract new investment from local and foreign sources which will lead to expansion of industries
- There will be exchange of research findings /training which will help in economic development
- There will be improved access of raw materials for industrial development
- There will be improved transport link between Kenya, Tanzania, Uganda and Rwanda which will facilitate faster movement of goods and services
- There will be increased employment opportunities because of free movement of people within the region and expanded trade
- There will be mutual political understanding between Kenya and its neighbours.
- Reduction of tariffs makes goods cheaper to the people in the regions thus affordable
- There will be improved negotiating powers in the international arena (Mark the 1st 4x1=4mks)

LONDIAN SUB-COUNTY JOINT EXAMINATION 2015
GEOGRAPHY PAPER1 SECTION A:

1.   Describe the continents origin according to the theory of Continental Drift.
        5mks
2.   a) Give three processes that led to the formation of lakes.
        3mks
 b) Apart from Lake Magadi, name two other lakes within the Rift Valley in Kenya that have high levels of salinity.
                                                                                                                2mks
3.   The diagram below shows erosional feature of the waves at the coast. Use it to answer questions (a).
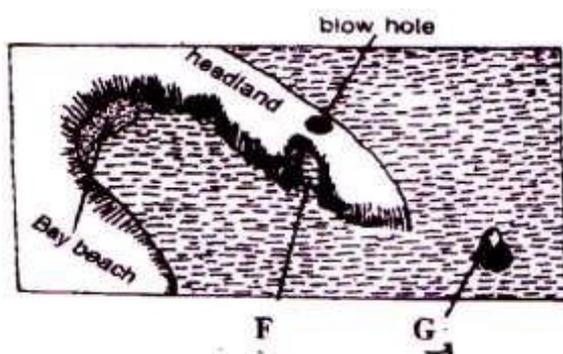
        a)   Identify the features marked F and G.
        2mks
        b)   Give three submerged upland coasts.
        3mks
4.   a) Define the term solar system.   2mks   b) Give three reasons why the interior of the earth is very hot.
3mks
5.   The diagram below represents underground features in a limestone area. Use it to answer the questions below.
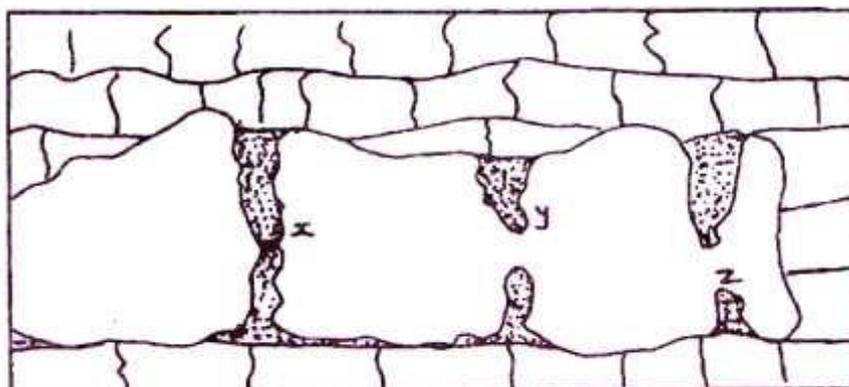
        a)   Name the features marked X, Y and Z.   3mks
        b)   State two factors that influence the development of karst scenery.
        3mks   **SECTION B**
6.   Study the map of Karatina sheet 121/3, scale 1:50,000 provided and answer the following questions.
a) i) What was the magnetic declination of the map as at January 1992?   1mk   ii)
Give the latitudinal and longitudinal extend of the mapped area.   2mks b) i)
Apart from contours, name one other method used to show relief in the mapped area.   1mk
 ii) Calculate the area of Mt. Kenya forest reserve within Kirinyanga District shown in the map. Give your answer in
square kilometers.   2mks c) i) Apart from the Houses, name two human made features in grid square 8755.   2mks
ii) Assume that four people live in each house in the grid square 8755, calculate the population density. 2mks d) Describe
the flow of river Sagana.   3mks

e) i) Using evidence from the map, identify two farming activities taking place in the mapped area.   2mks
ii) Explain three factors which have influenced any one of the farming activities identified in (e) (i) above   6mks f)
Briefly explain how the following factors have influenced the distribution of settlement in the mapped area.

 i) Forest reserve   2mks   ii) Rivers   2mks

7.

a)   Differentiate between soil profile and soil catena.   2mks
b)   Explain any three factors that affect soil formation.   6mks
c)   Explain four measures taken to conserve soils.   8mks
d)   Explain how burning of land leads to soil degeneration.   4mks
e)   Your class intends to carry out a field study on soils within the school environment

 i) State any two methods of data collection you will use.   2mks   ii) List any three methods of data recording you are
to use.   3mks

8.

a)   Name three types of desert landscape.   3mks
b)   Explain three ways through which the wind carries out erosion in the desert.   6mks
c)   With the aid of a well labeled diagram, describe how a rock pedestal is formed.   8mks
d)   State two factors which influence the transportation of material by wind in desert.   2mks
e)   Explain three ways through which desert influence human activities.   6mks

9.

a)   Define the term hydrological cycle using a well labeled diagram.   2mks
b)   Describe the process through which circulation of water is carried out.   8mks
c)   Explain the significance of the hydrological cycle.   8mks
d)   Students from Mau Secondary school are planning to carry out a field study on sources and uses of water around their
      school.

i) Identify any three activities they would carry out before the actual field study.   3mks ii)
Give four reasons why it is important to have a working schedule.   4mks iii)
State any four methods they would use to record data.   3mks

10.

a) i)   Differentiate between weather and climate.   2mks
ii) Identify ant three elements of weather.   3mks   b) State
the apparatus found in Stevenson screen.   3mks
c)   Describe the factors that influence temperatures.   3mks
d)   The table below shows rainfall and temperature figures of a station in Africa. Use it to answer question d (i))ii).

Month	J	F	M	A	M	J	J	A	S	O	N	D
Temp	23	24	23	22	19	17	18	19	19	20	22	23
Rainfall/mm	109	122	130	76	52	34	28	38	70	108	121	120

      i) Calculate annual range of temperature (show your calculation)   2mks ii) Calculate the annual rainfall.   2mks
e) i) What is weather forecasting?   2mks ii) Explain the significance of weather forecasting to human activities.
6mks **LONDIAN SUB-COUNTY JOINT EXAMINATION 2015**
      GEOGRAPHY
      PAPER2 SECTION
      A:

1. a) Name two indigenous hardwood tree species in Kenya.   2mks   b) State
three factors that favour the growth of softwood forests in Kenya.   3mks 2. a) Distinguish
between land reclamation and land rehabilitation.   2mks   b) State three
methods that are used to control tsetse flies in Kenya.   3mks 3.   Use the map of
Ruhr Industrial zone below to answer question (a)
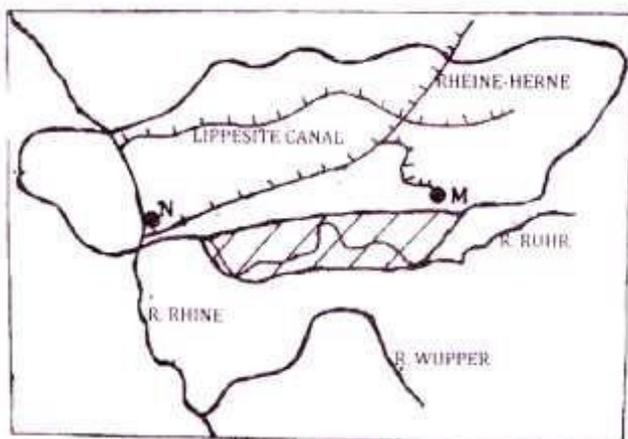
a) Name the towns marked M and N.   2mks
b) State three physical factors that influence the location of the iron and steel industry in the Ruhr Region of Germany.
    3mks
4.   a) Name two horticultural crops grown in Kenya.   2mks
    b) State three reasons why horticulture is more developed in Netherlands than Kenya.   3mks
5.   a) What is air pollution?
    2mks   b) State three effects of air pollution in urban areas.
    3mks

SECTION B

6.   The table below shows agricultural crops produced in Kenya in the year 2008 to 2011. Use it to answer question (a).

CROPS	AMOUNT IN METRIC TONNES			
	2008	2009	2010	2011
Tea	240,000	314,000	399,000	405,000
Coffee	98,000	54,000	42,000	55,000
Wheat	70,000	37,000	54,000	66,000
Others	165,000	180,000	147,000	155,000

a) I)Using scale of 1cm to represent 100,000 metric tones, draw a compound bar graph to represent the data above.
    6mks
ii) State two advantages of compound bar graphs to represent geographical data.   2mks b) State five physical factors that favour coffee growing in the Kenyan Highlands.   5mks
c) Describe the stages involved in coffee production from harvesting to marketing.   6mks
d) Compare coffee farming in Kenya and brazil under the following sub-headings:
- Growing areas   2mks
- Processing   2mks
- Labour   2mks
7. a)i)Define the term tourism.   2mks   ii)
Name two tourist attractions found in the rift valley province of Kenya.   2mks b) Explain four factors which hindered the development of domestic tourism in Kenya.   8mks
c) Explain four problems experienced by the Kenya government in its efforts to conserve wildlife.   6mks
d) Explain four factors which have made Switzerland a major tourist destination in Europe.   8mks

8. The diagram below represents the functional zones of urban center. Use it to answer question (a)
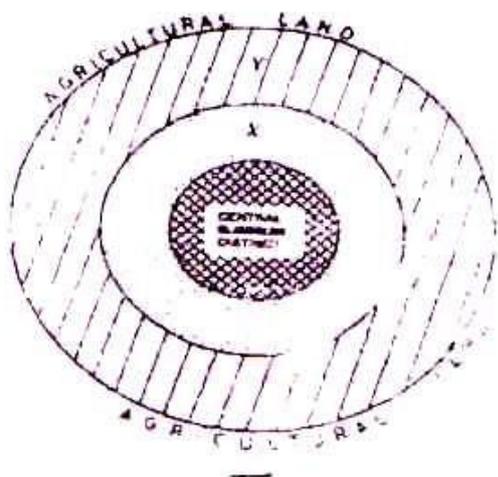
a) i)Name the zones marked X and Y.   2mks   ii) List three functions of the central Business District   3mks   iii) State two ways in which the residents of the zone labeled AGRICULTURAL LAND benefit from urban center.
              2mks b) State four factors that contribute to the emergence of slums in urban centers.   4mks
c)   Explain the measures that could be taken to control the following problems in urban centers in Kenya.
 i) High rate of crime   2mks ii) Water pollution.   2mks
d)   Explain five factors that led to the growth of Kisumu town.   10mks
9.a)i)Distinguish between transport and communication.   2mks
ii) Use the sketch map of Lake Victoria below to answer the question that follow.
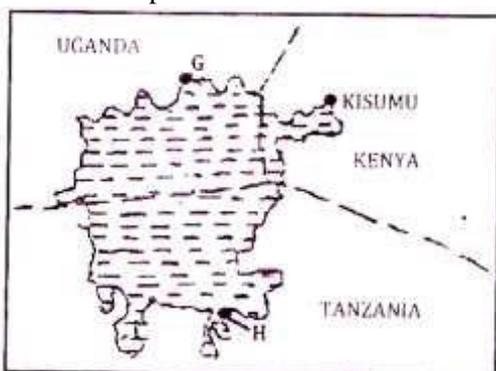
a)   Name the Lake ports marked G and H.   2mks
b)   i)State three advantages of using water transport .   3mks ii)
Explain three problems facing river transport in Africa   6mks iii) State two
reasons why flowers from Kenya are transported by air.   2mks
c)   Study the map of Africa below and use it to answer question (i) (ii)
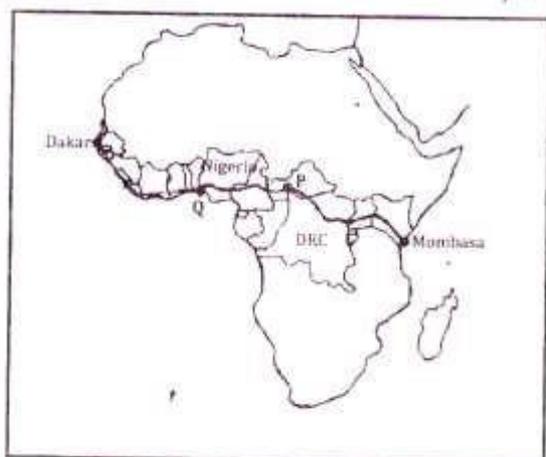
i)   Name the towns marked P and Q .   2mks ii) Name two export goods from Kenya that are transported along the highway.   2mks d) Explain three benefits of the Trans-African highway to the economies of Africa countries.   6mks 10.a)   i)What are trading blocs?   2mks

ii)   Name two trading blocs which Kenya is a member.   2mks b) i)Name two commodities that Kenya import from European Union.   2mks
ii)   State four benefits of European Union.   4mks c) i)Explain three human factors that influence internal trade in Kenya.   6mks
ii)   Explain three measures the Kenya government has undertaken to promote international trade.   6mks
d) Form four students carried out a field study at an open air market near their school.
i) State three objectives of their study.   3mks **LONDIAN SUB-COUNTY JOINT EXAMINATION 2015**
GEOGRAPHY
PAPER 1 SECTION
A:

MARKING SCHEME
1. Describe the origin of continents according to the theory of continental drift   (5 marks)
• Originally the earth was one land mass/pangae/super continent
• Pangae was surrounded by large water mass/ocean/panthalassa
• Pangae broke into two sub –continent Northern continents /Laurasia and southern continent /Gondwana land
• The two continent was separated by a narrow sea/Tethys
• The two continents broke further
• Laurasia split to form the continents on the Northern hemisphere
• Gondwana split to form southern continents the continents gradually drifted to their present position.
2. a) Give three processes that led to the formation of lakes
• Deposition by water/rivers/glaziers
• Erosion by wind/ice
• Crustal warping
• Volcanic activities
• Faulting
• Mass wasting
• Falling meteorites ▢   Weathering by solution
b) Apart from Lake Magadi, name two other lakes within Rift valley in Kenya that have high levels of salinity
                                                                                           (2 marks)
• Lake Nakuru
• L. Elementaita
• Bogoria
3. The diagram below shows erosional feature of the waves at the coast. Use it to answer question (a)
a) Identify the features marked F and G   (2 marks)
   F – arc
   G - Stack
b) Give three submerged upland coasts   (3 marks)
   Ria coasts
   Fiords/fjord coast
   Longitudinal/dalmation coast
4. a) Define the term solar system   (2 marks)
   Refers to the sun planets and other heavenly bodies that orbit the sun.
b) Give three reasons why interior of the earth if very hot   (3 mks)
• The earth still retains the original heat which it had before it started cooling
• The outer part colled at a faster rate than the interior where much heat was trapped and is still retained
• It is believed that there is a lot of radioactivity going on inside the earth and which causes explosions occasionally a lot of heat is released through nuclear fission.

- The mass of crustal rocks exerts a lot of pressure on the rock materials beneath it. This intense pressures generates a lot of heat inside the earth (3 mks)

5. a)
- X- limestone pillar
- Y- Stalactite ☐ Z- Stalmagite

b) State two factors that influence the development of karsts/scenery
- Presence of hard well jointed rocks to ensure permeability
- Hot and humid climate with abundant rainfall to supply water to erode the rocks
- Water table should be far much below the surfaces to allow water to move down through the rock and enhance the formation of features
- Presence of limestone/dolomite rock

6. Study the map of Karatina sheet 121/3 scale 1:50,000 provided and answer the following questions

a) i) What was the magnetic declination of the map as at January 1992?
- ☐ $01^0 09^1$ (1 mark)

ii) Give the latitudinal and longitudinal extend of the mapped area (2 mrks)
Between latitude $0^0 15^1$ and $0^0 30^1$ south
Between longitude 37^0 and 00^1 East and $37^0 15^1$ East

b) i) Apart from contours, name one other method used to show relief in the mapped area (1 mark)
- ☐ Trigonometric stations
- ☐ Spots heights ii) Calculate the area of Mt. Kenya forest reserve within Kirinyaga district shown in the map. Give your answer in square kilometres Complete squares = 19
Incomplete squares = 35
Area = 19+ (35/2)= $36.65Km^2$ + 1 i.e. 35.5km

c) i) Apart from the houses, name two human made features in grid square 8755 (2 mks)
- roads /all – weather loose surface roads
- Track/footpath
- Bridge
ii) Assume that four people live in each house in the grid square 8755, calculate the population density(2 mks)
Population density = 14 x $14/1km^2$
56/6=56 person per square kilometer

d) Describe the flow of rive r sagana (3 mks)
- From Mt. Kenya forest, river sagana flows westwards to Chieni area
- From chieni, the river flows southwards through the remaining parts of the mapped area
- From the Northern parts to Chieni, the river course is faitly straight
- From Chieni southwards, it flows through a meandering course

e) i) Using evidence from the map, identify two farming activities taking place in the mapped area (2 marks)
- Cattle rearing/livestock keeping evidenced by cattle dips slaughter house and Matuto salt lick
- Fish farming shown by existence of fish research centre in GS 8560 and fisheries department in Karatina town ☐ Plantation farming within Mt. Kenya
- Coffee growing shown by presence of coffee factories

ii) Explain three factors which have influenced any one of the farming activities identified in (e) (i) above
(6 marks)

Cattle /livestock rearing
- Thicket scrub, scattered trees indicates the availability of pasture
- Numerous rivers or streams and dams provided water for the animals
- Provision of veterinary services evidence by cattle dips/veterinary station in Karatina town ensure the cattle are kept healthy
- Cool temperature due to high altitude make the area conducive for rearing exotic/cross breed animals

- High demand likely suggested by dense settlements provides market for the livestock products (3 x2=6 mks) Tea growing
- High rainfall evidence by forest vegetation, high density of permanent rivers enables growing of tea or coffee
- Cool temperatures due to high altitude provides ideal conditions for growing coffee/tea
- High density of settlements likely suggest availability of labour in coffee farmers
- Good network of tea leaves enables harvested tea leaves /coffee berries to reach to the markets or tea processing centres. Fish farming
- Numerous rivers and streams provide water for fish ponds
- Fisheries department in Karatina town provide extension services /technical advice.
- Cool temperatures evidenced by forest/high altitude provide suitable conditions for rearing fish especially tilapia and trout

f) Briefly explain how the following factors have influenced the distribution of settlements in the mapped area

(2 marks) i)

Forest reserve
- Vast areas in northern /north – western parts of the mapped area have no settlements
- There are few/scattered settlement around kirimamburi and hombe areas

ii) Rivers   (2 marks)
    Many rivers valleys have no/few settlements- they are steep/ deep/ narrow construction of houses difficult /roads.

7. a) Differentiate between soil profile and soil catena   (2 mrks) soil profile is the vertical arrangements of various soil layers, while soil catena is the arrangement of soil on a mountain slope from the top to the bottom

b) Explain any three factors that affect soil formation   (6 mrks)
- Climate
- Time
- Topography
- Living organism
- Parent materials
- Places with heavy rainfall are heavily weathered and leached to deep soils compared to drier areas

c) Explain four measures taken to conserve soils   (8 marks)
- Contour ploughing – is a type of cultivation in which ploughing is a lined to the contours of the fields. Ploughing down the field side is not encouraged. The farrows in contour ploughing trap the water and hence prevent soil erosion
- Terracing – is the type of cultivation in a horizontal steps on the sides of a field to control soil erosion.
  The soils are held by each bench crops can also be planted on the slopes to form protection beds.
  Planting of cover crops- perennial crops like bananas, tea and coffee can be planted to prevent soil erosion. It is done when quick maturing crops are planted since they leave the land bare when harvested.
- Regulation of livestock- advising the farmer on the importance of the carrying capacity of the land which is done by extension officers.
- Introduction of crop rotation – is the regular change in the type of crop grown on a particular area of land in order to maintain the fertility.
- Mixed farming – is when farmer plant crops and keeps animals
- Fallowing –leaving part of the land idle. Fallow land increase nutrients in the soil ☐ Use of fertilizer
- Afforestation and reforestation
- Building of check dams
- Water management

d) Explain how burning of land leads to soil degeneration   (4 mrks)
- Burning kills the micro organisms and thus robbing the soil of organic matter these leads to deterioration of the soil structure. The soil become devoid of nitrogen because nitrogen fixing bacteria are killed
- It also leads to burning of humus which leads to loss of fertility

e) Your class intends to carry out a field study on soils within the school environment
i) State any two methods of data collection you will use   (2 mrks)
- Observation
- Secondary data
- Photography ☐ Experimentation

ii) List any three methods of data recording you are to use (3 mrks)
- Tabling
- Photography
- Note making
- Drawing

8. a) Name three types of desert landscape (3 mks)
- Sandy deserts
- Stony deserts
  Rocky deserts

b) Explain three ways through which the wind carries out erosion in the desert (6 mrks)
- Abrasion /sand blast action
  This is whereby materials carried by wind /load grids/scrubs/polishes desert rock surfaces
- Deflation
  Is the blowing away of loose/unconsolidated material like dust and fine particles by rolling them on the ground. This creates hollows called depressions.
- Attrition
  Is wearing away of wind borne materials as it scrub against the rock surface/as they collide against each other
  (any 3 x 2 = 6 mrks)

c)   With the aid of a well labeled diagram, describe how a rock pedestal is formed (8 mrks)
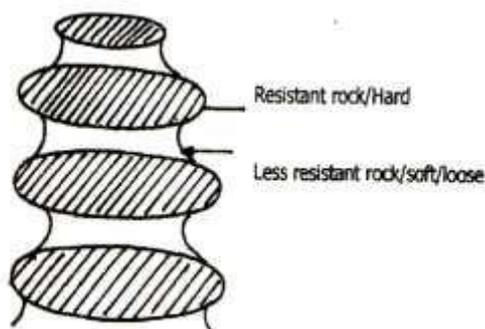
- Formed by wind erosion through abrasion
- Form when a mass of rock with alternating layers of hard and soft rocks lie on the path of a wind laddened with weathered materials.
- The softer layers of the rock are heavily eroded as the carried materials knock on them
- Sand abrasion is more effective up to about two metres above the ground level
- Pronounced abrasion at the bottom of the rock mass and in softer layers gives the pedestal its irregular shape

                                                                                    Diagram
    Explanation – any 3 points – 3 marks
    Diagrams –labelling of resistant rock with the right shape   2 marks

    N/B if shape is wrong no marks at all in the diagram

d) State two factors which influence transportation of material by wind in deserts (2mrks)
-     Strength and speed of the wind
- Presence of obstacles
- Presence of vegetation cover or water mass
- Nature of the load/weight of the load
- Weather change   (Any 2 x1= 2 mrks)

e) Explain three ways through which desert influence human activities (6 mrks)
- Desert soils are dry thereby discourage settlement / agriculture

- Less deposits transported by wind to far places are fertile and encourage agriculture in areas they land
- Desert feature such as yardangs, zeugens, attract tourists who bring in foreign exchange
- Extensive bare surfaces of the deserts are used for testing weapons and car speeds
- Deflation hollows may contain water which is used for domestic and irrigation purposes
- Solar radiation which is intensive in deserts is used to generate solar energy (any 3 x 2= 6 mrks)

9. a) Define the term hydrological cycle using a well labeled diagram (2 mrks)
- Continuous interchange of water between the sea, atmosphere and land

b)
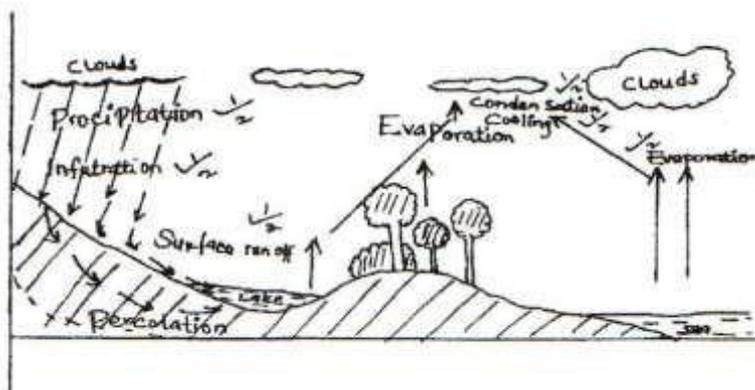
- Evaporation – takes place on all water surface and from plants
- Cooling – as water vapour rises into the atmosphere it expands then cools
- Condensation – when cooling continues below dew point it turns into tiny droplets which join to form clouds
- Precipitation – when clouds become heavy they release moisture which come back to the ground as rain
- Surface runoff- as water reaches the ground, it flows on the surface into valleys, lakes etc ☐ Infiltration – some water from the precipitation seeps into the ground
- Percolation – infiltrated water moves downward and sideways by gravity.
- Overland flow- surface runoff and river flow flows back to the oceans, seas etc (total – 4 mrks)

c) Explain the significance of the hydrological cycle (8 mrks)
- Maintains atmospheric energy for development of storms
- Moisture in atmosphere regulates terrestrial radiation
- It reduces occurrence of arid and semi-arid conditions by maintaining the required precipitation.
- Provides water balance in the ecosystem ☐ Provides adequate moisture in the atmosphere ☐ It balances the right precipitation.

d) Students from Mau secondary school are planning to carry out a field study on sources and uses of water around their school.

i) Identify any three activities they would carry out before the actual field study (3 mrks) ☐ Seeking for permission
- Conducting a reconnaissance
- Adjusting objectives and hypothesis
- Choosing methods of data collection
- Assembling the necessary equipment‟s
- Preparing a working schedule
- Dividing students into groups (any 3 points x 1mrk= 3 mrks) ii) Give four reasons why it is important to have a working schedule (4 mrks)
- It gives enough time for each activity
- Provides an estimate of the overall time required for study
- It reduces the tendency to waste time
- It gives a framework which helps one not to deviate from study topic
- It helps to tackle the study topic systematically
- Provides a basis for evaluation as the field of study progress (any 4 x 1= 4 mrks) iii) State any four methods they would use to record data (3 mrks)
- Taking notes

- Tallying
- Field sketching
- Filling in questionnaire
- Tape recording
- Taking photographs
- Mapping   (any 2 x 1= 2mrks)
10. a) i) Differentiate between weather and climate   (2 marks)
     Weather – the daily atmospheric conditions of a certain place at a specific time. Correct definition x 1 Climate – it is the average weather condition of a particular place for a long period of time usually 30-35 years correct definition x 1
     ii) Identify any three elements of weather   (3 marks)
- Precipitation
- Temperature
- Humidity
- Air pressure
- Wind
- Cloud cover
- Sunshine   (Any 3 x 1= 3 mrks)

b) State the apparatus found in a Stevenson screen   (3 marks

- Maximum thermometer ☐   Minimum thermometer
- Six"s thermometer
- Hygrometer (dry and wet bulb thermometer)   (Any 3 x 1= 3 mrks) c) Describe the factors that influence temperature   (5 mrks)
- Latitude – areas around the equator have high temperature
- Altitude – high altitude areas have low temperature
- Ocean currents – warm ocean currents raise temperature while cold ocean currents lower temperature ☐ Length of the day
- Distance from the sea- areas close to sea has high temperature in comparison to the areas that are far.
- Aspect /slope direction
- Cloud cover- cloud cover lowers the temperature – cloudless sky raises temperature e)

i) Calculate annual range of temperature (show your calculation)   (2mks)
     Highest – 24
     Lowest – 17/7c
ii) Calculate the annual rainfall   (2 mrks)
     1008mm
e) i) What is the weather forecasting?   (2 marks)
     This is prediction of the future atmospheric conditions over a short period for a specific place
     ii) Explain the significance of weather forecasting to human activities   (6 mrks)
- enables farmers to plan their farming activities
- Helps man to plan on suitable clothing for the day
- Man is able to guide the landing and taking off aircraft and ship
- Man is able to time and plan the spoiling activities
- It influences the design of houses
- It helps in guiding tourist activities
- Enables man to avert any natural disaster related to weather
- Enables man to plan military activities   (any 3 well explained points x 2 = 6 marks) **LONDIAN SUB-COUNTY JOINT EXAMINATION 2015**
     GEOGRAPHY
     PAPER2 SECTION A:

MARKING SCHEME
1. a) Name two indigenous hardwood tree species in Kenya (2mks)

- meru oak
- elgon olive / east Africa ovive
- elgon teak
- camphor - mangrove

b) State three factors that favour the growth of softwood forests in Kenya (3mks)
- cool climate experienced in the Kenya highlands
- The Kenya highlands receive heavy rainfall about 1000mm annually supporting the growth of forests
- Most parts of Kenya highlands are steep and rugged unsuitable for settlement and farming
- High demand for timber and wood products in Kenya

2. a) Distinguish between land reclamation and land rehabilitation (2mks)
- Land reclamation is the process of converting less productive land into a more productive state for agriculture or settlement purposes while land rehabilitation is the process of restoring/ degraded / impoverished/ damaged land back to a useful state.

b) State three methods that are used to control tsetse flies in kenya (3mks)
- bush clearing of the tsetse fly habitat
- spraying using insecticide
- sterilization of male tsetse fly
- using the traps
- creation of buffer zones 3.

a) Name the towns marked M and N (2 mk)
   M – Dortmund
   N – Duisburg

b) State three physical factors that influenced the the location of the iron and steel industry in the Ruhr region of Germany (3mks)
- Availability of coal / iron ore/ limestone which provided raw materials from the Rhine valley need by the industry
- The river Rhine and its tributaries provided water for cooling machines in the industry/ for industrial use
- The region is served by navigable rivers such as River Rhine, R. Ruhr, R. Lippe
- Availability of coal provided power required in the industry

4. a) Name two horticultural crops in kenya (2mks)
   Vegetables/ tomatoes/ onions/ carrots (allow any correct vegetable) max 1mk
   Fruits / oranges, pineapples, plums, mangoe, (allow any correct fruit) flowers, roses max 1 mk

b) State three reasons why horticulture is more developed in the Netherlands than in kenya   (3 mks)
- Netherlands has a higher urban population than kenya
- High demand both local and foreign for horticultural crop products in Netherklands than in kenya
- Farmers in Netherlands have more access to capital needed for horticultural crop products in Netherlands than in kenya
- There is more advance and appropriate technology in Netherlands which has enhance horticulture farming than in kenya
- Netherlands unlike kenya has highly skilled labour production and handling of agricultural products
- There is more advance horticulture farming related research in the Netharlands than in kenya
- Netherlands unlike kenya has a well organized marketing procedures/ co-operatives / auction markets which are condusive fpr horticultural farming. (any 3 well compared points 3 x 1) 3mks) 5. a) what is air pollution? (2mks)
- This is the contamination of air with additional materials in solid or gaseous form causing injury or harm to human health or property

b) State three effects of air pollution in urban areas (3mks)
- gases from some factories contain substances which erode roofs of houses
- some gases from factories contain substances that dissolve in water to form acid air
- smoke/ gases when inhaled cause diseases of the respiratory system
- dusty smog/ smoke reduce visibility
- gases/ excess carbondioxide cause increased temperature

   SECTION B
6. The table below shows agricultural crops produced in kenya in the years 2008 to 2011. Use it to answer question
a) (i) Using a scale of 1cm represent 100,000 metric tones, draw a compound bar graph to represent the data above

A COMPOUND BAR GRAPH SHOWING CROPS PRODUCED IN KENYA BETWEEN 2008 AND 2011
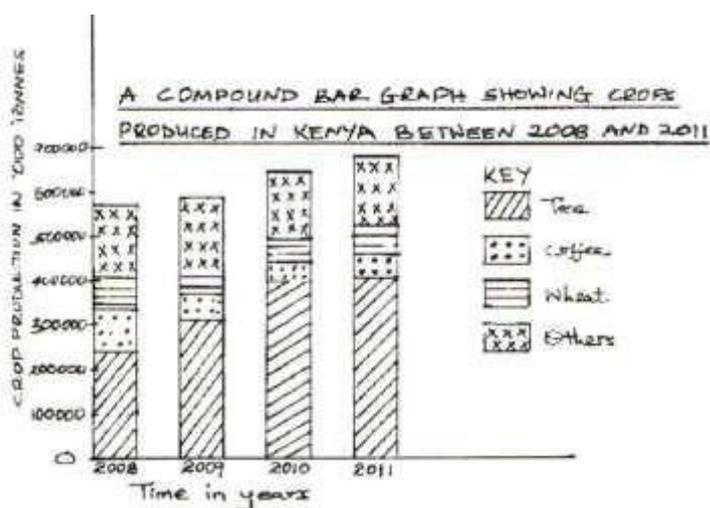
(ii) State two advantages of using compound bar graphs to represent data (2mks)   -
Are easy to construct / draw
-    They allow easy comparison
-    Are easy to read/ interpret
-    They can be used to represent a wide range of data
-    They give clear visual impression of individual components

b) State five physical factors that favour coffee growing in the Kenyan highlands (5mks)
-        High rainfall / 1000mm – 1500mm
-        Well distributed rainfall throughout the year
-        The soils are deep, well drained volcanic type
-        The area experiences cool to warm conditions / 14^0c – 24^0c throughout the year
-        The land is gently sloping that allow good drainage   -   Altitude of between 910m – 2100m above the sea level

c) Describe the stages involved in coffee production from harvesting to marketing
-        The ripe / deep read berries are picked by hand
-        The harvested berries are carried in sacks to the factory
-        The berries are sorted out to remove the unripe / diseased berries
-        The berries are graded in to grade A and B
-        The different grades are weighed
-        The berries go through a machine that removes the outer covering / pulp
-        The beans are fermented in tanks for some time
-        The beans are removed and the beans winnowed
-        The beans are sorted out and graded according to size and quality   -   The beans are roasted at temperatures of about 100^0c
-        The beans are ground into powder and packaged ready for sale

d) Compare coffee farming in kenya and brazil under the following sub headings:
        Growing areas (2mks)
        In kenya coffee is mainly grown in the highlands while in Brazil coffee is mainly grown on the rolling
plateau of the South Eastern Brazil   Processing
 In kenya coffee berries are processed using wet or wash method while Brazil processes its coffee using both the natural
    dry method and the pulped natural process.
        Labour
    In kenya work is done by family members/ casual labourers while in Brazil work in Fazendas in done by the tenants

7. a) i) Define the term tourism (1 mk)
        Tourism is the visiting of places of interest for recreational purposes

Name two tourist attraction found in the Rift Valley Province of Kenya (2mks)

The varied relief features:

- Wild animals
- Birds/ flamingoes
- Hot springs / geysers/ fumaroles/ geothermal
- Vegetation - Peoples" culture
- Pre- historic sites/ historicals sites e.g. Kapenguria
- Mining sites
- Sports tourism e.g. fishing

b) Explain four factors which hindered the development of domestic tourism in kenya (8mks)

- The roads leading to tourism sites are poorly maintained. Discourages people from visiting such sites
- Inadequate local comparing and advertisement of tourist attraction/ special packages leads to low public awareness
- Familiarity with tourist attraction among the local people makes them fail to appreciate their beauty and value - Negative attitude towards local tourism limits the number of people who engage in tourism
- Insecurity from gangster/ poachers in national parks and game reserves scare people away from visiting them
- The high cost of accommodation in the game lodges discourages local tourism / the high cost of hiring tourism vehicles discourages people from touring / low income

c) Explain three problems experienced by the Kenya government in its effort to conserve wildlife (6mks)

- Illegal hunting/ poaching of wild game threatens the conservation efforts and leads to extinction of some species of animals.
- Overstocking of some wild animals leads to destruction of natural environment through overgrazing
- Frequent drought experienced in some of the national parks and reserves leads to loss of animals through starvation to death
- Straying wild animals from the parks to settlement leads to destruction/ high cost of fencing - Inadequate capital limits government conservation efforts / over reliance on foreign donor.
- Rapid human population growth leads to encroachment of game parks and reserve
- Pollution of the environment leads to death of wild animals
- Fire outbreaks destroy wildlife

d) Explain four factors which have made Switzerland major tourist destination in Europe (8mks)

- Favourable climate; with warm summer which allow swimming and sun bathing and cold winters which encourages winter sports such as skiing
- The varied scenery consisting snow – capped mountains, cascading waterfall and glaciated landscape provides varied tourist attraction which are lacking in other parts of Europe make the country easily accessible from the other European countries
- Political neautrality of Switzerland remove any travel restrictions to the country as a tourist destination
- Diversity of languages spoken in Switzerland makes it possible for tourist to communicate and move around the area
- Well developed transport network tourist sites provide easy accessibility
- Advance training in tourist industry enables Switzerland to provide the necessary services to tourist thus attracting more to the country/ package tours services offered e.g. hotels.
- Availability of health resorts
- Inherent hospitality of swiss people encourage tourist to visit Switzerland
- Well developed financial institutions (banks) have promoted easy transaction hence encouraging tourist to Switzerland
- Switerland in HQ of several international agencies; this has lead to the influx of delegates to the country later turn to tourist.

8.

a) (i) Name the zones marked X and Y (2mks)

X – industrial zone / lower class housing

Y Suburb area

(ii)List three functions of the central business district (3mks)

- Trading
- Administrati
on - Recreation
o Commerce / banking/ insurance

o Offices
o Location of light industries   (any 3 x 1 = 3mks)

(iii) State two ways in which the residents of the zone labeled AGRICULTURAL LAND benefit from the urban centre

- They have ready market for their produce
- The working class can communicate to and from the centre of work while living in cheaper houses
- They have better chances of job opportunities than those living far away from the centre
- They enjoy cheaper goods and services from the centre due to closeness to the town (any 2 x 1 = 2mks) b) State four factors that contribute to the emergence of slums in urban centres (4mks)
- Low income due to unemployment, under employment
- Shortage of proper houses
- In adequate financial activity
- High cost of land/ houses in other parts of the town
- Poor urban planning
- High rates of migration into urban centres   any 4 x 1 = 4mks

c) Explain the measures that could be taken to control the following problems in urban centres in kenya (i) High rate of crime (2mks)
- Encouraging community policing to complement the effort of the police force
- Controlling the influx of illegal arms in order to reduce the incidents of thuggery -   Enforcing laws without favour to provide protection to the law abiding citizens
- Getting rid of street families to reduce the number of idlers in town any 2x 1 = 2mks

(ii) Water pollution   (2mks)
- Educating the residents on the appropriate ways of refuse disposal to avoid polluting water resources
- Enacting and enforcing laws on environment management/ charging those found contravening the laws
        Any 2 x 1 = 2mks

d) Explain five factors that led to the growth of Kisumu town (8mks)
- Its location at the shores of Lake Victoria led to its growth as a lake port handling trade among the three East African Countries
- In 1901 Kisumu became a terminus for the Uganda railway allowing the influx and settlement of early Asian traders. This led to commercial development of the town.
- Kisumu was a regional administrative centre during the colonial period, this led to the setting up of administrative poffcies and other infrastructural facilities
- The rich hinterland with mineral and agricultural resources provided raw materials for the development of industries and food supply for the town residents
- The high population in the surrounding areas provided the required labour force for the development of industries - The nearby rivers and Lake Victoria provided fresh water for the industrial and domestic use
- The well developed means of transport / road/ railway/ airport makes the town easily accessible from other parts of the country.

9. a) (i) Distinguish between transport and communication (2mks)
- transport is the movement of goods and people from one place to another while communication is the transmission of ideas or information from one person to another.

(ii)
        H- Musoma
        G – Jinja

b) State three advantages of using water transport (3mks)
- water transport uses naturally existing route/ requires little capital to establish
- it is cheaper mode of transport for bulky goods especially over long distances -   it is less affected by congestion
- goods transported are safe from destruction / damage due to containerization
- there is less traffic congestion on the water ways unlike on roads

(ii)Explain three problems facing river transport in Africa (6mks)
- many rivers in Africa have rapids/ waterfalls/ cataracts which hinder movement of vessels -   some rivers have seasonal regime / varying volume making it difficult to use the rivers
- some rivers have shallow waters / silted river mouths making navigation on them difficult

- some river has floating vegetation that chokes the engines making it difficult for vessels to move/ hinder movement of vessels
- some rivers have narrow channels which are unsuitable for sailing
- some rivers are short making navigation difficult/ uneconomical to develop

(iii) State two reasons why flowers are transported by air (2mks)
- The flowers are highly perishable
- Flowers are light in weight
- There is high demand for flowers thus the need to supply urgently -   High market prices are able to pay / compensate for the air freight charges c) Study the map of Africa below and use it to answer question (c)

(i)   Name the towns marked P and Q   (2mks)
         P – Bangui
         Q – Lagos

(ii) Name two export goods form kenya that are transported along the highway (2mks)
- leather and leather products / hides and skins
- meat and meat products
- petroleum products
- soda ash
- coffee
- tea
- fluorspar
- tobacco products
- sisal
- pyrethrum extracts

d) Explain three benefits of the Trans – African highway to the economies of African countries (6mks) - He encouraged trade / agriculture in countries along the highway by providing cheap means of transport
- It has led to growth of towns/ ports along the highway which are focal points for various economic activities
- It has created employment opportunities in the transport industry thus raising the standards of living of the people in many countries
- The countries along the highway earn revenue from toll charges levied on trucks that use the route
- Has encouraged cheap / easy movement of raw materials/ finished products which has facilitated growth of industrial trade

10. (a) (i) What are trading blocs (2mks)
- This is economical association among countries in a region formed with the aim of promoting regional trade among member of states

(ii)Name two trading blocskenya belongs (2mks)
- Common market for Eastern and Southern Africa (COMESA)
- East Africa community (E.A.C)

(b) (i) Name two commodities kenya imports from European countries (2mks)
- Textile
- Motor vehicles – iron and steel , textures
- Electronic goods, - pharmaceuticals
- Machinery

(ii)State four benefits of European union (4mks) -
Promoted trade among member states
- Introducing of single currency, the euro
- Intergration and cooperation among EU members
- Elimination of all trade tariffs and duties
- Improved agriculture production

(c) (i) Explain three human factors favoring internal trade in kenya (6mks)
- A large population providing a large market hence large volume of internal trade through high consumption levels
- Adequate and efficient means of transport and communication for successful internal trade through movement of goods and services from the producer to the consumer
- Availability of capital for large scale production of commodities ensuring internal trade

- High level of security in the country makes internal trade to prosper since risks of losing property is reduced

(ii) Explain three measures the kenya government has undertaken to promote international trade (6mks)

- Kenya has signed trade agreement with many countries in Europe, Asia, Africa and America to increase exportation of goods
- Establishment of kenya external trade authority to research on accessing top markets in Europe, Japan and USA and more new others to expand exportation of goods and services
- Formation of the kenya national chamber of commerce and industry and industry to advice the government on hw to increase industrial production and increase the volume of industrial products for export.
- Establishment / creation of the kenya national bureau of standards to ensure high quality of goods produced maintained by manufacrtures to meet the international standards for export markets
- Expansion of the agriculture sector to increase and continue exporting agricultural profducts to the rest of the world

(d) Form four students of your school came out a field study at an open air market near your school. State three objectives for their study (3mks)

- To identify the types of goods sold in the local market
- To find out the problems facing the traders
- To find out the resources of the goods sold in the market
- To identify the types of trade going on in the local market
- The map act the sphere of influence of the market
- To identify the type of goods sold at the market

WESTLANDS DISTRICT MOCK EXAMINATION 2015
Kenya Certificate of Secondary Education(K.C.S.E)
GEOGRAPHY
Paper - 312/1
July/August**- 2015**

SECTION A
1.   a)   Identify two types of environment.
2mks   b) Mention two major areas covered under physical Geography.   2mks 2.
a)   State any two reasons why the interior of the earth is very hot.   2mks
b) State two proofs that the earth is spherical.   2mks
3.   a)   Give two reasons why wind action is more effective in the desert .   2mks
     b) State three ways in which wind transport materials in the desert .   3mks
4.   a)   State two factors that influence the rate of river erosion.   2mks
         b)   Give three characteristics of river in the youthful stage.   3mks
         c)   Give two major differences Ria coast and Fiord coast.   2mks
5.   The diagram below shows the movement of the glacier.
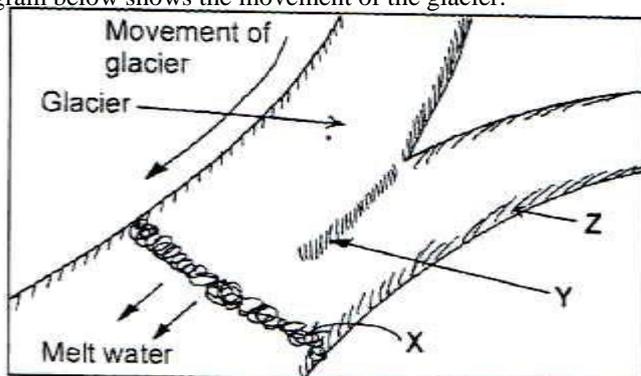
         Identify the moraines marked X,Y and Z.   a)   3mks
  b) State two factors that influence the movement of glacier.   2mks
                                   SECTION B
6.   Study the map of Migwani 1:50,000 (sheet 151/1) provided and answer the following questions.
a)   i)   Give two methods used in the map to represent relief.
         2mks   ii) Measure the length of the dry weather road D502 from the junction at the grid reference 923788 to the end
of the road.
     Give your answer in kilometers and meters.   2mks
b)   i) Give the bearing and direction of the air photo principal point in grid reference 911628 from the trigonometrical
station at grid reference 922644.   2mks ii) Calculate the area to the west of all weathered road enclosed by Eastings 90
and 93 and Northing 78. 2mks c) i) Draw a cross-section along the Northing 73 from Easting 05 to Easting 10.   On it mark and
name the following:
         -   Nzia Hill
         -   a river
         -   a track   3MKS
d)   Citing evidence from the map, give two social functions of Gwani trading center.   2mks
e)   i)   Describe the relief of the area covered by the map.   4mks
         ii) Explain three physical factors that led to the establishment of Mutitu (NDOOA) trading center.   6mks
7.a) i)   What is a weather station?   2mks
ii) State three characteristics of a Stevenson screen.   3mks   b)
Explain how rainfall is measured in a weather station.   4mks
 c) The table below shows the rainfall and temperature figures for a weather station in Kijabe. Use it to answer the questions that
follow.

Month	J	F	M	A	M	J	J	A	S	O	N	D
Temp^{0}c	16.2	16.5	17.1	17.1	16.1	15.2	15.2	15.0	16.0	16.1	16.1	16.3
Rainfall mm	100	104	75	232	323	218	196	231	196	152	127	71

  Source :Kenya Meteorological Department
     Calculate :

i) The total rainfall for the station.

2mks   ii) The annual range of temperatures for the station.   1mk

d) i)   On the graph paper provided, draw a simple bar graph to represent the rainfall figures for the station. Use a vertical scale of 1cm to represent 20mm.   5mks

ii) Describe the characteristics of the climate experienced in the above weather station.   3mks e)

Suppose you visited a weather station for a field study on weather.

   i)   Give two reasons why it is important to conduct a reconnaissance.   2mks

   ii)   State three advantages of studying a weather station through fieldwork.   3mks

8.a) i)   What is faulting?   2mks

ii) Give two differences between normal fault and reverse fault.   2mks b) i)

Apart from the rift valley name two other features produced by faulting.   2mks   ii) With the aid of a well labeled diagrams, explain how rift valley is formed through tensional forces.   7mks c) Explain three ways in which faulting influence drainage.   6mks d) Your class carried out a field study along the rift valley.

i) State two objectives for your study .   2mks ii) Give two sources of information that you would use in preparation for the study.   2mks iii) State two follow up activities.   2mks

9. a) Differentiate between weathering and mass wasting,.   2mks b) Explain three factors that influence mass wasting. 6mks

c)   i)   State five causes of soil creep.   5mks

      ii) Explain how the following processes occur:
      -    Avalanche
      -    Exfoliation   3mks

d)   Students are planning to carry out a field study of an area affected by mass wasting.

i) How did they prepare for the field study?   3mks ii) State three methods that they could use to record data in the field. 3mks

10. The diagram below shows some features formed in a limestone area. Use it to answer the questions that follow.
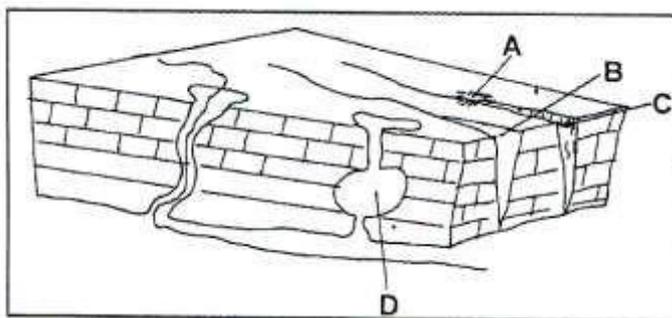
a)   i)   Name the features marked A-D.

4mks   ii) State three conditions necessary for the development of a karst landscape.   3mks

iii) Give two characteristics of a karst landscape.   2mks b) Explain three benefits of karst landscape to man.   6mks

c)   i)   What is an artesian well.   2mks

ii) Explain three conditions which are ideal for the formation of an artesian well.   6mks d)

Outline two significances of grounds water to man.   2mks

WESTLANDS DISTRICT MOCK EXAMINATION 2015

Kenya Certificate of Secondary Education(K.C.S.E)

GEOGRAPHY

Paper - 312/1

July/August**- 2015**

SECTION A:25MKS

1.   a) Differentiate between horticulture and market gardening.   2mks   b) Outline two reasons why horticulture products from Kenya are in high demand in Europe.   2mks

2.   a) What is energy crisis?   2mks   b) State three problems that the Kenyan government face in the development of energy sources.   3mks

3.   a) Give three reasons why road transport is commonly used in Kenya than railway transport.   3mks   b) State three benefits of containerization in transport industry.   3mks

4.   a) Name two man-made induced environmental hazards.   2mks   b) Name three natural hazards common in Kenya. 3mks

5.   a)   What do you understand by the following terms.

i) Primary industries. 1mk ii) Secondary industries 1mk

b) State three factors that contributed to the development of the iron and steel industry in Ruhr region.3mks

SECTION B

6. a) Define the following terms

i) Eco-tourism 2mks ii) Package tours. 2mks b) State two political factors that favour tourism in Switzerland. 2mks

ii) Outline three factors that have hindered the expansion of domestic tourism in Kenya. 3mks

c) State three ways used in Kenya to minimize poaching of wild animals in game reserves and game parks. 3mks

d) The table below shows the number of foreign tourists who visited Africa between 1980 and 2000.

REGION	NO. OF TOURISTS IN THOUSANDS		
	1980	1990	2000
Central Africa	590	400	100
Western Africa	1000	1000	2400
Eastern Africa	1200	900	2500
Southern Africa	1500	2800	4000
Northern Africa	3000	3900	7000
TOTAL	72900	9000	16000

i) Calculate the percentage decrease in the number of foreign tourists who visited Eastern Africa between 1980 and 1990.

2mks

ii) State two possible causes of the decline in foreign tourism in Eastern Africa between 1980 and 1990.

2mks iii) Present the information in the table using proportional circles.

6mks iv) Explain three factors that led to a large number of tourists visiting Northern Africa.

3mks

7. a) i)Distinguish between bilateral and multilateral trade. 2mks ii)State any four factors that influence trade. 4mks

b) i)Name any three trading blocs in Africa. 3MKS

ii)Explain any four benefits of trading blocs.

8mks c) Explain the following terms:

-Balance of trade 2mks

-Invisible trade. 2mks d) State any four ways in which Kenya is trying to enhance its external trade. 4mks 8. a) i)Identify two provinces where gold is mined in South Africa. 2mks ii)Describe the processing of gold from the time the ore is lifted to the surface. 5mks b) Explain four contributions of gold to South Africa economy. 8mks

c) State four problems of diamond mining in South Africa. 4mks

d) Explain three effects of mining to the environment. 6mks

9.a) i) Name two provinces in Western Canada where forestry is practiced.

2mks ii) Outline the main characteristics of temperature hardwood forests.

4mks b) Explain four problems that affects forests in Kenya.

8mks

c) Give four reasons why softwood tree species are preferred in planted forests in Kenya. 4mks

d) i)Explain why forests are more wide spread in Canada than in Kenya. 4mks ii) State three measures the Kenyan government should undertake to encourage afforestation. 3mks

10 a) State three physical conditions that favour large scale farming in Kenya. 3mks

b) Describe the cultivation of sugarcane in the lake region of Kenya from preparation of land to the harvesting stage.5mks

c) i)Give five problems facing sugarcane farming in Kenya. 5mks

ii)Expalin three reasons why Kenya import sugar yet she is a producer of the same commodity. 6mks

d) Your class visited a sugar factory for a field study on sugar processing.

i) Outline four stages of sugar processing that the class have observed. 4mks ii) Name two by- products of sugar that the class may have identified during the study. 2mks

WESTLANDS DISTRICT MOCK EXAMINATION 2015

Kenya Certificate of Secondary Education(K.C.S.E)

GEOGRAPHY

Paper - 312/1 July/August-

2015

MARKING SCHEME

SECTION A

Answer all the questions in this section.

1. a) Physical environment.

Human environment. **(Any**
2×1=2mks) b) The earth and the solar system.

The earth and internal structures at the earth vegetation.

Soil and climate.

Drainage.

Weather and climate **(Any 2×1=2mks)**

2. **a)** Retaining the original heat during the formation of the earth.

Radioactivity which releases energy in form of heat.

Weight of the crustal rocks increases pressure leading to increased temperatures. **(Any 2×1=2mks)**

b) Circumnavigation. Where one can go round the earth along straight path and back to starting point.

Raising of the sun in the East and setting in the West.

All the planets are spherical and the earth is one of the planets so it must be spherical ship visibility. Ship whose parts appear gradually as observed from the shore.

The surface of the earth appears curved from high towers/high flat form photographs taken by satellites shows that the earth is spherical. **(Any 2×1=2mks)**

3. **a) Give two reasons that make wind action more effective in deserts.**
- The presence of loose unconsolidated dry masses of mud, sand and gravel.
- Absence of vegetation cover.
- The occurrence of strong storms with the desert. **(Any 2×1=2mks)**

b) Suspension - The very fine and light particles are held by wind turbulence and transport over long distances.

Siltation - The medium size particles move through jumps and lops.

Surface creep – The heavy load is rolled or dragged along the surface. **(Any 2×1=2mks) 4. a)** - Volume of water-the larger the volume of water the higher the ability to erode.
- Gradient and velocity-on a steep slope the flowing water has greater energy (force) to erode them a gentle one.
- Nature of the bed lock – soft/hard.
- Nature and amount of load-large and hard objects like boulders and trees trunks cause more erosion by corrosion them small particles like sand. **(Any 2×1=2mks)**

b) Vertical erosion is dominant but head ward erosion is also evident.
- Have deep, narrow and steep sided valleys.
- U-shaped cross-sections.
- Steep gradient. **(Any 1×3=3mks)**

c) Ria if formed when a river mouse is submerged while fiord is formed when a glacial valley is submerged.

Ria is deeper towards the mouth and shallower inland while fiord is deeper in land and shallower

seaward. - Have deep, narrow and steep sided valleys.
- U-shaped cross-sections.
- Steep gradient. **(Any 2×1=2mks)**

5. a) X-Terminal moraine.

Y-Lateral moraine.

Z-Medial moraine. **(1×3=3mks) b)** -Gradient of the slope.
- Thickness and weight of the ice.
- Friction along the floor.
- The season, whether summer or winter. **(Any 2×1=2mks)**

6. a) i) Give two methods used in the map to represent relief. **(2 marks)** -
Contour lines.
- Trigonometrical station. **ii) Identify two man-made features found at the grid square 9274.** - Shops
- Market
- School
- Other tracks and footpath

iii) Measure the length of dry weather road D 502 from the junction at grid reference 923788 to the end of the road. Give your answer in kilometers and meters. 14km 800m **(2 marks)**

b) i) Give the bearing and direction of the airport principal point in grid square 911628 from the trigonometric station at 922644.

Bearing 220^0 Direction S.W. **(2 marks)**

ii) Calculate the area to the west of the all weather road enclosed by Easting 90 and 93 and Northing 78. **(2 marks)**

c) **A CROSS SECTION ALONG NORTHING 73 FROM EASTING 05 TO 12. c)** **graph.**

d) Citing evidence, give two social functions of Gwaani trading centre.
- Educational centre - School
- Health centre – Health centre
- Communication centre – Post office. **(2marks)**

e)   **i)** Describe the relief of the area covered by the map. **(4 marks)**
- The highest point in the area covered by the map is above 1530m and the lowest point is below 600m.
- The eastern part of the area covered by the map is gently sloping.
- There are numerous river valleys e.g. one occupied by river Mui ngoo.
- There are several ridges on the Southern side of the area covered by the map e.g. Kitui hills.
- The Southern part of the area covered by the map is step. ii) Explain three physical factors that led to the establishment of Mutitu (NDOOA) trading centre.
- Presence of gently sloping topography which made it easy for the construction of buildings and transport lines.
- Availability of many permanent rivers e.g. Ikoo which provided water for domestic use.
- Availability of raw materials e.g. forest which are used in construction of houses.

7. a) i) Weather station is a place that is set aside for the purpose of observing, measuring and recording weather elements. **(2×1=2marks)**

    ii) - Painted white to reflect heat and light.
- Stevenson's screen is made of wood because wood is a poor conductor of heat. **-**   It has louvers to allow free circulation of heat.
- It has metallic legs/stands to prevent termites from destroying the wood.
- It is raised about 1.2m above the ground to prevent terrestrial radiation. **(3×1=3marks)**

b) i) Rainfall is measured using a rain gauge. It consists of a cylindrical container which have collecting jar for collecting water and a funnel on top. The funnel direct water into the collecting jar. The water is then emptied into a measuring cylinder usually every 24 hours.
    Well explained   **4×1=4 marks**

c) i) 100+104+175+232+323+218+196+231+196+152+127+71=2125MM   **(2×1=2marks)**
    ii) $17.1^0c-15.0^0c=2.1^0c$ **(1×1=1marks)**

d) i) ii) -The climate conditions are generally cool.
- The station receives high rainfall 2125mm.
- The lowest rainfall is 71mm received in December.
- The temperature range is 2.10c.
- They receive rainfall throughout the year. **(3×1=3marks)**

e)   **i)** – It helps the researcher to gather information and relevant document for official use.
- Helps one decide on the appropriate methods of data collection.
- Help identify appropriate equipment.
- To familiarize with the area of study.   **Any other relevant point 2×1=2marks**   **ii)** -
Enables learners to collect first hand information.
- Helps students develop manipulative skills.
- Makes learners apply the knowledge learned in the classroom.
- Makes learning interesting and real.
- It enhances visual memory. **(3×1=3marks)**

8. a) i) What is faulting?
- This is the process through which brittle crustal rocks fracture due to tectonic forces. **(2marks)**   **ii) -**
Explain how the following processes occur. - Avalanche
- The movement involves rock and ice movement down mountains slope or valley slope under the influence of gravity.
- It can occur if a fresh fall of snow is not firmly consolidated and it slides off the former/older snow.
- It can also occur when partially thawed masses of enormous ice falls down a valley slope.
- They are enormous and move down rapidly. **(3marks)**
- **Exfoliation**
- Caused by temperature differences in arid areas.
- During the day the rock surface heats up rapidly and then cools at night and Rocks being poor conductors of heat, there is very little heat transferred to the inner layers compared to the outer layer.
- This causing strain to result between the two layers and over time the outer shell will develop cracks and later peel off forming a smooth dome shaped rock known as an exfoliation. **(3marks)**

b) Students are planning to carry out filed study of an area affected by mass wasting.
i)   **How did they prepare for the field study?**

- Ask for permission from the relevant authorities.
- To carry out previsit.
- Prepare a working schedule.
- Formulate objectives and hypothesis. **(1×3=3marks)** **ii) State three methods that they would use to record data in the field.**
    Photograph taking -
Filling in of questionnaire.
- Tape recording.
- Video taking. **(Any relevant point 1×3=3marks)**

9. a) A- Swallow hole
    B- Dry valley
    C-Limestone gorge
    D-Cave
    ii) - Surface rock and rock beneath should be thick limestone dolomite or chalk.
- The rock should be hard and well jointed.
- The climate should be hot and humid to facilitate faster chemical weathering.
- The water table in the limestone rocks should be deep below the surface to allow formation of conspicuous features.

(1×3=3marks) **iii) -** Surface drainage absent or intermittent solution depressions.
- Underground steams.
- Bare rugged surface with rock outcrops and steep side rivers valley. **(2×1=2marks)**

b) -Tourist attraction; surface & underground features are beautiful to look at and they bring many tourist who earn foreign exchange.
- Collapse of dolines into the water tables may lead to lakes in the karst area.
- Limestone regions are very good grazing ground particularly for ship because of the thin soil.
- Cement used in building is derived from limestone.
- Limestone is used in steel and iron where it is used to separate iron from other impurities. **(3×2=6marks)**

c) i) – Artesian well is a type of well which normally gives a continuous fow the water being forced upward by hydrostatic pressure the outlet of the well is sunk below the source of water. **(2×1=2marks)** **ii)** - The aquifer must be sandwiched between impermeable rocks so that it can retain water.
- Aquifer must outcrop in a region with a rich source e.g. rainy area or beneath a lake.
- The aquifer must dip from a region of water intake and the rock layers must form abroad syncline or basin.
- The mouth of the well must be lower than the intake area this allows the water to be forced to the surface by pressure with no need of pumping it. **(2×3=6marks) d)** - Acts as source of rivers.
- Acts as source of water for industrial and domestic use.
- Used for irrigation.
- Provision of hot water.
- Source of minerals. **(1×2=2marks)** **WESTLANDS**
    DISTRICT MOCK EXAMINATION 2015
    Kenya Certificate of Secondary Education(K.C.S.E)
    GEOGRAPHY
    Paper - 312/2
    July/August**- 2015**
    MARKING SCHEME
    SECTION A

1. a) Differentiate between horticulture and market gardening.
- **Horticulture** refers to the growing of fruits, flowers and vegetables for commercial purposes while **market gardening** is the intensive cultivation of vegetables and fruits for sale/in the nearest urban centre.

b) Outline two reasons why horticultural products from Kenya are in high demand in Europe. **(2 marks)**
- Direct link/air line from Kenya to Europe.
- Climate of Kenya is more favorable to a number of horticultural cops than in Europe.
- Accept any other relevant point. **(Any 2×1=2mks)**

2. a) - **What is energy crisis?** **(2 marks)**
- Energy crisis is a situation where demand for oil and its product outstrips the supply and as a result, the prices goes up hence the prices of all other goods and services.

b) Three problems that the Kenyan government face in the development of energy sources. **(3 marks)** - Fluctuation of water levels.
- The putting up of H.E.P projects requires huge capital investments which is inadequate.
- Some of the potential areas have been exploited because the sites are located in remote areas.

3. a) <u>Give three reasons why road transport is commonly used in Kenya that railway transport.</u>   (3mks) -
Road transport is more flexible than railway transport.
- Can reach more areas/destinations.
- Road transport is faster than railway transport.
- Road transport is suitable for short distances.
- Railway lines are more expensive to build and maintain.
- Mismanagement of the railway corporation has made it inefficient.   **(Any 3×1=3mks)**

b) <u>State three benefits of containerization in transport industry.</u>   (3 marks)
- Reduces theft of goods/pilferage.
- Utilization of space/a lot of goods can be carried by a single container.
- Reduces damage of goods.
- Easy transportation.
- Load and off load is much easier.   **(Any 3×1=3mks)**

4. a) Name two man-induced environmental hazards.   (2 marks) - Soil
erosion.
- Pollution.
- Desertification/deforestation.

b) <u>Name three natural hazards common in Kenya.   (3 marks)</u>
- Flooding
- Hailstone.
- Landslide.
- Lightning. **(Any 3×1=3mks)**

5. a) What do you understand by the following terms.

i)   <u>Primary industries (1 mark)</u>
- They are mainly involved in the exploitation of natural resources i.e. mining, fishing, forestry and agriculture.   **ii) <u>Secondary industries (1 mark)</u>**
- They change raw materials into other semi-processed or finished products e.g. coffee factories, cotton ginneries e.t.c.

b) <u>State three factors that contributed to the development of the iron and steel Industry in Ruhr region. (3 marks)</u> -
Availability of raw materials eg. Coal, iron ore limestone e.t.c.
- Existence of an entrepreneurial culture and capital.
- Availability of ready market e.g. Ruhr region.
- Availability of power e.g. anthracite coal burns with great heat suitable for heating boilers.
- Cheap water transport – water ways e.g. Rivers Ruhr, Emschear and Lippe.
- Historical reasons – Before industrial revolution most of the towns in this region had craft industries, iron ore had been smelted for a long time.
- Skilled labour – villagers had developed skills in metal working.
- Availability of water needed in the factories for cooling, cleaning and producing steam in the boilers. **(Any 3×1=3mks)**

SECTION B

6. a) i) Eco-tourism – A type of tourism that gives emphasis on the management and conservation of the environment.

(1×2=2mks)

ii) Package tour – an arrangement by which tourism agency undertakes to provide, to a large number of tourists, all the services needed at fairly low rates.

b) i) -   Political stability
- Political neutrality.   **(2×1=2mks) ii)** - Ignorance about the value of domestic tourism.
- Lack of interest due to common attractions.
- Some local communities are hostile/inhospitable.
- High cost of travelling.
- Low income by most Kenyans.
- Inaccessibility and remoteness of many potential tourist sites. **-** High tourist sites.
- High rates charged on local tourists.   **(3×1=3mks) c)** - Perimeter fencing of game parks and reserves. **-**   Establishing a strong anti-poaching police unit.
- Employment adequate game wardens.
- Enacting legislation against poaching.
- Providing mass education on the value of wild game.
- Probability trade in game products.   **(3×1=3mks)   d) i)**
      $\frac{1200-900×100\%}{1200}$
            = $\frac{300×100\%}{}$

1200

=25%

(1×2=2mks) ii) - Political insecurity (tribal clashes) civil wars.

- High cost of travelling by air.
- High rates charged in parks and hotels.
- High level of inflation in the region.
- Completion from other regions.

(2×1=2mks)

iii)

	1980	1990	2000
Area = r² =	7290000	9000 000	16000 000
= r² =	2700	3 000	4 000
= r² =	2.7cm	3.0cm	4.0cm
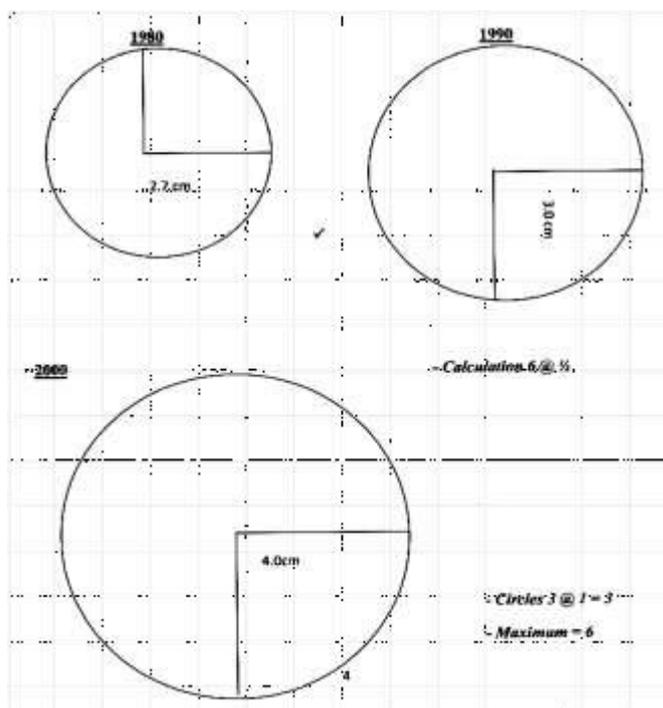
To encourage afforestation.

- Increases payments for trees harvested from private farmers.
- Encourage the shamba-system where farmers plant trees in reserved area as they grow their short term crops.
- Encourage village tree nurseries which provide seedlings freely to the farmers.
- Avail the fast maturing exotic trees e.g. Australian eucalyptus to the farmers.
- It should improve on its method of sensitizing the population on important of trees. **(3×1=3mks) 7a) i)** Bilateral is trade between two countries while multilateral is trade between many countries, more than two. **(2 marks) ii)** **Factors that influence trade.**
- Availability of capital.
- Availability of goods.
- Security.
- Demand for goods.
- Availability of transport.
- Existence of trading blocs. **(Any 4 x 1 = 4mks) b) i) Trading Blocs in Africa.**
- The common market for Eastern and Southern Africa (COMESA)
- The East African Co-operation (EAC)
- Southern African Development Community (SADC).

- Economic Community of West Africa. (ECOWAS). **(Any 3 x 1 = 3 marks) ii)**
 Benefits of trading blocks.
- They create a large market for goods to be bought and sold.
- They help to create harmony and co-operation among the member states.
- Reduction of tariffs makes the goods cheaper to the people in the regions.
- The expanded market for goods has promoted industrial development as the demand for goods increases.
- Inter-state trade has encouraged the development of transport and communications.
- The trade between the countries has created job opportunities which have led to a high standard of living.
- Trade in the region has stimulated agricultural development.
- Has reduced the reliance of countries in Africa on goods and services from other part of the world.
- They have made it easier for goods to be readily available to the people of the regions. **(Any 4 x 2 = 8marks) c) i) Balance of Trade.**
- This is the difference in value between a country"s visible exports and import. **(2 marks) ii)** **Invisible Trade.**
- Trade in intangible products i.e services. **(2 marks)**

b)   Ways in which Kenya is trying to enhance its external trade.
- Advertisement of export goods.
- Improving its infrastructure e.g roads.
- Encouraging foreign investors.
- Lowering taxes levied on trade goods.
- Encouraging sale of processed goods. **(Any 4 x 1 = 4marks)**

8a) i) Name two provinces where Gold is Mined in South Africa.
- Orange Free State.
- Transvaal province. **(2 x 1 = 2marks) ii)** **Describe the processing of gold from the time the ore is lifted to the surface.**
- Crushing of the hard blanket into small chips that are then mixed with water and ground it as fine as flour or pulp to get gold.
- Grounded pulp is placed in a solution of sodium cyanide.
- The content is called potassium gold cyanide, it is not pure gold since it contains amount of uranium.
- The solution is mixed with zinc causing the gold to precipitate out leaving.
- This is fed into sulphuric acid tanks which dissolves the uranium.
- Gold is melted out and formed into bars at Gemstone town Rand. **(5 x 1 = 5 marks) b)** **Explain four contributions of gold to   South Africa economy.**
- It earns the country foreign exchange which is used as a means of paying international debts.
- Offers employment to many people hence raising their standards of living.
- It has led to widespread urbanization contributing to the formation of the wiwaters rand conurbation.
- It has formed a broad based market for other industrial aerations e.g by provide market for secondary industries through linkages and external economics of scale, it benefits engineering foot wear electrical and construction industries.
- It has led to the development of modern infrastructure e.g roads and railways, communication, banking . -   Social amenities such as schools, hospitals, shopping centres to cater for the workers. **(4 x 2 = 8 marks) c)** **State four problems of Diamond Mining in South Africa.**
- Fluctuation in the world market prices.
- Low mineral contents in the ore making its processing elaborate and expensive.
- High cost of mining and processing of diamond.
- Labour competition with other sectors of the economy.
- Continued mining has led to reduced diamond reserves as most mines are becoming depleted.
- Leads to land dereliction. **(4 x 1 = 4 marks) d)** **Explain three effect of mining to the environment.**
- Causes land dereliction.
- Causes soil erosion.
- Lowers the water table.
- Causes pollution.

 (6marks)

9a) i) Two provinces in Western Canada - British
Columbia -   Alberta. **ii)** **Characteristics of Temperate hardwood forests.**
- Trees are deciduous - shed leaves in winter.
- The trees have broad leaves.
- There are few trees per square.
- They have very hard.

- The trees are tall.   **(Any 4 x 1 = 4 marks) b) <u>Problems that affect forests in Kenya.</u>**
- Illegal logging-Cutting of trees by unlicensed people for either charcoal of timber. This reduces the number of trees in the forest.
- Pest & diseases. Prevalence of many pests and diseases kill the trees e.g the Aphids destroy cypress trees in planted forests.
- Forest fires- Accidental or intentional fire turn down the trees reducing the size of forests.
- Prolonged drought conditions, strain the water in the soil and this lead to death of trees in the forests.
- Drugs growing - Large portion of forest have been illegally been cleaned to grow bhang especially in Mt. Kenya forest reserve. This reduces the size.
- Degazettement of government forest e.g in 2002 led to large forest being cleaned for settlement.

(Any 4 explained x 2 = 8mks)

c)   <u>Reasons why soft woods are preferred in Kenya.</u>
- They mature within a short time (15 years)
- They are easy to work with on because the wood is soft.
- They are light therefore easily transported.
- They are not as bulky as hard wood trees.
- Soft woods are preferred by pulp industries as they produce quality paper. **(Any 4 x 1 = 4 marks) d) i) <u>Reasons why forest are more widespread in Canada than Kenya.</u>**
- Much Canada‟s surface land is mountainous therefore forestry is ideal economic activity. -   Northern Canada is very cold for human settlement. Much of this area is covered forest.
- Many parts of Western and Eastern Canada have thin soil - which are left for forest.
- Canada does not have high population density in Maritime Provinces is under forest.

(Accept any other correct point)

(4 x 1 = 4marks) ii) <u>Measures Kenyan government should take to encourage afforestation.</u>
- Increases payment for trees harvested from private farmers.
- Encourage the shamba-system where farmers plant trees in reserved area as they grow their short term crops.
- Encourage village tree nurseries which provide seedlings freely to the farmers.
- Avail the fast maturing exotic trees e.g Australian eucalyptus to the farmers.
- It should improve on its method of sensitizing the population on important of trees. **(3 x 1 = 3marks)**

10a) <u>State three physical conditions that favour large scale sugarcane farming in Kenya (3 marks)</u> -
Well drained fertile soils.
- Gently sloping undulating landscape.
- High rainfall of 1000mm - 1500mm per year which is well distributed throughout the year.
- Moderate to high temperature ranging of 20ºC - 28ºC.
- Long periods of sunlight.   **Any 3 x 1 = 3 marks)**

b) <u>Describe the cultivation of sugarcane in the Lake region of Kenya from the preparation of land to the harvesting stage.</u>
- The land is cleared to its natural vegetation.
- It is ploughed using either tractors or oxen-drawn plough.
- Hallowing is done to loosen the large humps of soil.
- Shallow furrows are dug at intervals of 1.2m to 1.8 metres apart.
- Cuttings/seed cane are planted in the furrows and then top dressing is applied.
- Weeding is done regularly.
- Herbicides are applied.
- After 18 months are cane is ready.
- The cane is cut/harvested using pangas.
- The harvested cane is loaded into lorries for transportation to the factory. (**Any 6 x 1 = 6 marks) c) i) <u>Give five problems facing sugarcane farming in Kenya. (5 marks)</u>**
- Pests such as termites and white grab and diseases such as stunting diseases attack the plants and lowers yields leading to low income for the farmers.
- Accidental fires destroy the cane resulting into heavy losses to the farmers.
- Flooding of the market by cheap imported sugar results in unfair competition thus causing delay in payment to the farmers. - Delay in harvesting reduces the quality and tonnage of the cane thus reducing the farmers earning.
- Closure of some factories such as Mumias had deprived the farmers of their income.
- Poor roads in some areas leads to delayed delivery of the cane to the factory lowering the quality and subsequently profit to the farmers.
- Prolonged droughts in some areas destroys crops leading to heavy losses.
- High cost of farm inputs reduces the farmers profit margin.

- Mismanagement of factories and cooperatives lead to delayed payments thus discouraging farmers.

(Any 5 x 1 = 5marks)

ii) **Explain three reasons why Kenya import sugar yet she is a producer of the same commodity.**
(5marks) - Hoarding of the commodity creates an artificial shortage.
- Country's production is lower than the demand.
- Cane sugar is more expensive than beet sugar hence the importation.
- Pests and diseases lower production causing a shortage.
- Mismanagement of the industry and eventual closure delays harvesting hence a drop in quality and quantity.
- Crop failure due to drought cause severe shortage.

d) **Your class visited a sugar factory for a field study on sugar processing.**

i) **Outline four stages of sugar processing that the class may have observed.** **(4 marks)**

- Weighing of the cane, Chopping of the cane, Crushing of the cane, Boiling, Filtering, Grading, Drying, Weighing of sugar, Packing/bagging, Crystallization, Bleaching. **(Any 4 x 1 = 4 marks)**

i) **Name two by products of sugar the class may have identified during the study. (2 marks)** - Molasses.
- Bogasse.
- Wax.
- Filter mud.

MAARA FORM FOUR JOINT EXAMINATION
Kenya Certificate of Secondary Education
312/1
GEOGRAPHY
Paper 1
July/August 2015

SECTION A
Answer ALL questions in this section
1. a) State two theories that explains the origin of the earth.　(2 marks) b) Name three components of the solar system　(3 marks)
2. a) Give two dates in a year during which the number of hours of darkness both the Northern and Southern poles have equal nights. (2 marks)
   b)　Why do the lengths of days and nights vary from one part of the earth to another?　(1 mark)
3. a) What is an air mass?　(2 marks) b) State three conditions that are associated with a depression.　(3 marks)
4. a)　Give two characteristics of sedimentary rocks.　(2 marks)
   b) Give an example of each of the following types of igneous rocks.
          i) Plutonic rocks.
     (1 mark)   ii) Hypabyssal rocks
                              (1 mark)
5. a)　Name the type of delta found at the mouth of
          i) River Nile
     (1 mark)   ii) River Omo.
                              (1 mark)
   b)　i) State three conditions that are necessary for the formation of a delta.　(3 marks) ii) State three characteristics of submerged lowland coasts.　(3 marks) **SECTION B**
   Answer question 6 and any other TWO questions in this section
6. Study the map of Migwani 1 : 50,000 (sheet 151/1) provided and answer the following questions.
 a) i) Measure the distance of All-weather road (bound surface) from the junction at grid reference 923788 to where it ends
       in the North. Give your answer in kilometres.　(2 marks)
          ii) Give the six figure grid reference of Mbooni dam, found in the North-Eastern part of the area covered by the map.
                                                                          (1 mark)
   b)　i) Giving evidence, state two types of settlements found in the area covered by the map.　(4 marks)
          ii) Citing evidence from the map, explain three factors that favour trading in the area covered by the map.　(6 marks)
   c)　Describe the relief of the area covered by the map.　(4 marks)
   d)　Giving evidence, give two types of natural vegetation found in the area covered by the map.　(4 marks)
   e)　Describing the drainage of the area covered by the map.　(4 marks)
7. a) Explain why the earth's polar diameter is less than the earth's equatorial diameter.　(2 marks) b) Outline any two characteristics of planet earth.　(2 marks)
   c)　Explain four proofs that the earth is spherical.　(8 marks)
   d)　Explain four ways in which the earth's crust is affected by earthquakes.
   e)　You intend to carry out a field study in an area affected by earthquakes.
          i) State three sources of information that you would use in preparation for the study.　(3 marks)
          ii) State two factors that would make it difficult for you to collect accurate data during the field study.　(2 marks)
8. The diagram below represents zones of natural vegetation on a mountain. Use it to answer question (a)
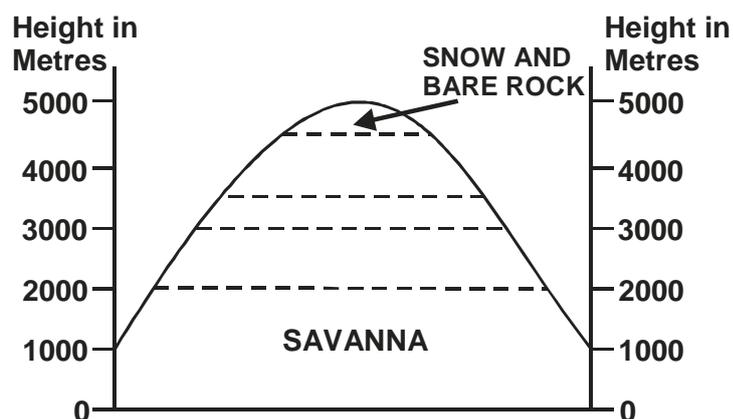
a)   i) Name the zones marked X, Y and Z.   (3 marks)   ii) Describe the characteristics of a tropical Savannah vegetation.   (6 marks)   iii)   State two reasons why the mountain top has no vegetation.   (2 marks)   b) Explain three factors that have led to a decline of natural grassland in Kenya.   (6 marks)

c)   Suppose you were to carry out a field study on the relationship between vegetation and altitude.
   i) State three objectives you would formulate for your study.   (3 marks)

   ii)   State three methods you would use to record the information collected during the field study.   (3 marks)   iii) Name two types of maps you would draw to present your findings
         (2 marks)

9.   a)   Explain the following processes of weathering.
 i) Hydration.   (2 marks)   ii) Oxidation   (2 marks)   iii) Frost action   (2 marks)   b) Describe how an exfoliation dome is formed.   (5 marks)

c)   Explain three physical factors that enhance movement of materials along a slope due to gravity.   (6 marks)

d)   State four indicators of occurrence of soil creep in an area.   (4 marks)   e)   Explain the effects of mass wasting on the following
 i) Tourism   (2 marks)   ii) Soil fertility   (2 marks)

10. a)   i) What is a river divide.   (1 mark)
         ii) Describe three ways by which a river transports its load.   (6 marks)   b) Give the characteristics of a river in its old stage.   (7 marks)
c)   Describe drainage patterns below.
 i) Superimposed.   (3 marks)   ii) Centripetal.   (2 marks)   d) Explain three factors that lead to rejuvenation of a river. (6 marks)

MAARA FORM FOUR JOINT EXAMINATION
312/2
GEOGRAPHY
July/August 2015

Answer ALL questions in this section

1. a) Distinguish between regional trade and domestic trade.   (2 marks) b) Identify three main levels of trade.   (3 marks)
2. a) Identify two coniferous trees found in Kenya.   (2 marks) b) Describe three characteristics of coniferous forests.   (3 marks)
3. a) Describe three physical factors favouring growth of Arabica coffee in Kenya.   (3 marks) b) Identify problems facing coffee farming in Kenya.   (3 marks)
4. a) What is soil conservation.   (2 marks) b) State three farming methods that assist in soil conservation.   (3 marks)
5. a) Define the term Hinterland.   (2 marks) b) State three factors that contribute to growth of Rotterdam as a major sea port.   (3 marks)

Answer question 6 and any other two questions from this section.

6. The data below shows population in the developing world.

Age - group	Male	Female
0 - 4	2,300,000	2,400,000
5 - 9	2,100,000	2,200,000
10 - 14	2,500,000	2,600,000
15 - 19	1,700,000	1,800,000
20 - 24	1,300,000	1,500,000
25 - 29	1,000,000	1,100,000
30 - 34	850,000	900,000
35 - 39	690,000	750,000
40 - 44	5,240,000	600,000
45 - 49	4,190,000	423,000
50 - 54	345,000	365,000
55 - 59	225,000	220,000
60 - 64	195,000	200,000
65 - 69	141,000	155,000
70 - 74	119,000	130,000
75 - 79	82,000	90,000
80+	100,000	120,000

a) Using a scale of 1cm rep. 400,000 people, draw a population pyramid to represent the above data.   (8 marks)
b) i) What is a population structure.   (2 marks)
      ii) Give two primary sources of population data.   (2 marks)
c) i) Name three types of internal migrations apart from rural-urban migration.   (3 marks)
      ii) Explain four ways of curbing rural-urban migration.   (8 marks)
d) Differentiate between the age structure of Kenya and Sweden.   (2 marks)

7. a) i) What is industrialization.   (2 marks) ii) State three measures the government of Kenya can take to attract industries to different regions.   (3 marks) b) Explain how the following factors influence the location of industries.
      i) Raw materials   (2 marks)
      ii) Government policy   (2 marks)
      iii) Water sources.   (2 marks)
c) i) State four problems associated with industries in Kenya.   (4 marks)
ii) State four characteristics of Jua Kali industries in Kenya.   (4 marks) d) Explain three factors which favoured the development of car and electronic industries in Japan.   (6 marks)

8. a) One of the problems facing road transport in Kenya is high frequency of accidents. Explain four conditions of roads in Kenya which lead to accidents.   (8 marks)
b) i) Identify two benefits if more commuters in urban centres in Kenya used public transport.   (2 marks)
      ii) Explain three reasons why road transport is used more than air transport is in East Africa.   (6 marks)
c) i) Draw an outline map of Great Lakes and St. Lawrence seaway of Canada and USA.   (2 marks)
      ii) On the outline map mark and name
            Ports of Montreal and Quebec.   (3 marks)
            New York state Barge of Erie Canal   (1 mark)
            Lake Ontario and Michigan.   (2 marks)
9. a) Name four geothermal power sites in Kenya.   (4 marks) b) State four factors that influenced the location of Olkaria Geothermal Unit.   (4 marks)

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c)   i) State four factors that limit the expansion of Geothermal Power Production in Kenya.   (4 marks)
       ii) Explain five ways in which Kenya has benefited from development of the seven Forks Dams HEP projects.
       (10 marks)
d)   State three benefits of rural electrification in Kenya.   (3
marks) **10.** a)   Namei) Three areas in Kenya where nomadic pastoralism is practiced.
       (3 marks)   ii) Three types of animals kept by pastoralists".
       (3 marks)   iii) State three characteristics of animals kept by pastoralists.
       (3 marks)   b)   i) Explain four problems that face nomadic
pastoralists in Kenya.   (8 marks)   ii) Explain four ways
in which the government of Kenya assists nomadic pastoralists" to improve the quality of their livestock.

AARA FORM FOUR JOINT EXAMINATION
Kenya Certification of Secondary Education
GEOGRAPHY
Paper - 312/1
July/August 2015
Marking Scheme

SECTION A
Answer ALL questions in this section
1.   a)   State two theories that explains the origin of the earth.   (2 marks)
- Passing star theory / big bung theory.
- Nebular cloud theory. *2 × 1 = 2 marks*
       b) Name three components of the solar system   (3 marks)
- The sun.
- The planets -   The asteroids. -   Comets
- Natural satellites / moons.
- Meteors / meteorites. *any 3 × 1 = 3 marks*

2. a) Give two dates in a year during which the number of hours of darkness both the Northern and Southern poles have equal
       nights.   (2 marks)
- 21st March
- 23rd September   *2 marks*
       b) Why do the lengths of days and nights vary from one part of the earth to another?   (1 mark)
- Because the earth is tilted on it's axis.
- Because of the apparent movement of the sun within the tropics/ because of the revolution of the earth. *any 1 × 1 = 1 mark*

3.   a)   What is an air mass?   (2 marks)
- An air mass is a large volume of air whose temperature and humidity are fairly uniform and which covers a large area
       (extensive surface area)   *2 marks*
       b) State three conditions that are associated with a depression.   (3 marks)
- Windy conditions.
- Light showers to heavy rainfall. -   Humid air
- It occurs in an area of low pressure.
- Circulation is anti-clockwise. *any 3 × 1 = 3 marks*

4.   a) Give two characteristics of sedimentary rocks.   (2 marks)
- Some sedimentary rocks contain fossils / organic materials.
- The rocks have cleavage / are foliated / have bedding planes.
- The rocks forms horizontal layers / are stratified. -   The rocks are non-cystalline. *any 2 × 1 = 2 marks*
       b) Give an example of each of the following types of igneous rocks.
       i)   Plutonic rocks.   (1 mark)
- Granite
- Syenite
- Gabbro
- Diorite
- Peridotite   *any 1 × 1 = 1 mark*
       ii)   Hypabyssal rocks   (1 mark)
- Dolorite

- Porphyrite
- Diabase
- Lamprophyre
- Granophyre
- Porphyry   *any 1 × 1 = 1 mark*

5.   a) Name the type of delta found at the mouth of
     i) River Nile   (1 mark)
               Arcuate delta
     ii) River Omo.   (1 mark)
               Bird's foot / digitate
    b) i) State three conditions that are necessary for the formation of a delta.   (3 marks)

- Show moving water at the mouth of a river/ gentle slope at the river mouth.
- Shallow shore.
- Calm sea / absence of strong coastal waves / deposition faster than removal.
- Absence of obstacles.
- Large amount of silt in the river mouth.*any 3 × 1 = 3 marks*
    ii) State three characteristics of submerged lowland coasts.   (3 marks)
- The coasts have broad shallow indentation / estuaries.
- The coasts have several creeks / fjards.
- The coasts have extensive marshes / mudflats exposed at low tides.
- Has broad continental shelf.   *any 3 × 1 = 3 marks*

SECTION B
Answer question 6 and any other TWO questions in this section

6.   Study the map of Migwani 1 : 50,000 (sheet 151/1) provided and answer the following questions.
a)   i) Measure the distance of All-weather road (bound surface) from the junction at grid reference 923788 to where it ends in the
North. Give your answer in kilometres.   (2 marks)
    5.8 (±0.1)   *2 marks*
    ii) Give the six figure grid reference of Mbooni dam, found in the North-Eastern part of the area covered by the map.
    (1 mark)
    084 784   *1 mark*

b)   i)   Giving evidence, state two types of settlements found in the area covered by the map.   (4 marks) -
    Linear settlement along all-weather roads e.g. Kangutheni-Gwani in N.W. area.
- Clustered /nucleated settlement e.g. Gwana settlement.
- Scattered / dispersed settlement e.g. central / Northern part.   *2 × 2 = 4 marks* ii) Citing evidence from the
map, explain three factors that favour trading in the area covered by the map.   (6 marks) -   Good transportation
means - e.g. presence of all-weather roads (Bound surface Gwani-Thika road etc.
- Presence of markets (shop e.g. - Mutito shopping centre)
- High population / demand - due to High population in some areas - e.g. Gwani settlement.   *any 3 × 2 = 6 marks*
c)   Describe the relief of the area covered by the map.   (4 marks)
- Plane / gentle / undulating area in Eastern part of the area such as Mutitu (Ndooa) area.
- Hills -e.g. Kitui hills.
- Steep landscape e.g. at Mutitu forest, evidencd by closs countours.
- Presence of River-valleys - occupied by such rivers like R. Ikoo.
- Highest area / lowest area.(Give height)*any 2 × 2 = 4 marks*

d) Giving evidence, give two types of natural vegetation found in the area covered by the map.   (4 marks) -
Scrubs - Eastern part of the area.
- Scattered trees - South Eastern part of the area covered by the map.*any 2 × 2 = 4 marks*
e)   Describing the drainage of the area covered by the map.   (4
marks)
- There are many rivers.
- The main river is R. Ikoo.
- The general direction of rivers is towards South Eastern direction.
- The main sources of rivers is from North-Western.
- Rivers are meandering e.g. R. Vinda.
- Some rivers forms dendritic pattern.
- Some rivers are permanent.   *any 4 × 1 = 4 marks*

7. a)   Explain why the earth's polar diameter is less than the earth's equatorial diameter.   (2 marks)
- At both North and South poles, the earth is flattened due to centripetal forces that constantly pulls the poles together, while at
the equator the earth bulges due to centrifugal forces. □ □

b) Outline any two characteristics of planet earth. (2 marks)
- Earth is the third planet from the sun.
- It can sustain life as it has water and oxygen.
- It takes 365½ days to revolve round the sun.
- It has only one satellite which is the moon.
- It is 149 million kilometers from the sun

c) Explain four proofs that the earth is spherical. (8 marks)
- Photographs taken from the outer space / satellites show the curvature of the earth.
- During the eclipse of the moon the earth casts a spherical shaped shadow on the moon.
- The earth's horizon is curved as evidenced by approaching ship whose funnels and masts appears on the horizon before the rest of the ship is seen from the coast.
- Circumnavigation of the earth along a straight path will bring one back to the same starting point from the opposite direction.
- All other planets including the moon are spherical; therefore earth being one in the solar system must be having a similar shape.
- The rising and setting of the sun as a result of the earth's rotation leads to places in the east seeing the sun earlier than those to the West. If the earth was flat, all the places would receive sunlight at the same time.
- The earth's horizon appears curved when one is at a high point.

d) Explain four ways in which the earth's crust is affected by earthquakes. - Earthquakes cause lateral / vertical displacement of rocks.
- They cause rising and lowering /uplifting and downwarping of parts of the sea floor. - They cause rinsing / lowering of land (depressions) -They cause landslides / slumps.

-
  They lead to faulting of the crust.
- They lead to volcanic eruptions.
    e) You intend to carry out a field study in an area affected by earthquakes.
    i) State three sources of information that you would use in preparation for the study. (3marks) -
Written material / books / magazines / newspaper maps.
- Photographs / video / films / slides.
- Resource persons.
- Electronic media / radio / TV /computers. *3 marks* ii) State two factors that would make it difficult for you to collect accurate data during the field study. (2 marks) - Inaccessibility of the area due to massive destruction / restrictions.
- Lack of informers because people may have been evacuated.
- Fear of another earthquake occurring.
- The rubble may obscure the evidence of the amount of damage.

8. a) i) Name the zones marked X, Y and Z. (3 marks)

X - Rainforest / Tropical forest

Y - Bamboo forest / bamboo

Z - Heath and moorland / Heath / Moorland / Scrub and Moorland. *3 marks*

ii) Describe the characteristics of a tropical Savannah vegetation. (6 marks)
- Savanna consists of a mixture of trees and grass.
- In the wetter areas, the grass is tall and grows close together.
- The grass dominates the undergrowth in the woodlands.
- In the drier areas, the grass is shorter / dries up.
- Grass dormintes the vegetation.
- Trees are umbrella shaped.
- Acacia trees are a dorminant species.
- Trees are shorter and more scattered.
- Some trees are stunted and have scaly barks / drought resistant.
- River, valleys have tall trees and thick bushes / riverline vegetation.
- During the dry season, the grass sprouts and the dominant seeds germinates.
- Some trees / shrubs and deep rooted /long roots.
- Some trees e.g. Bamboo have big bulks / stems. *6 × 1 = 6 marks*

iii) State two reasons why the mountain top has no vegetation. (2 marks)
- The temperatures are too low to support plant growth.
- There is no soil to support plants / bare rock / rocky / rocks.
- Water is always in a frozen state / ice / snow. *2 × 1 = 2 marks*

b) Explain three factors that have led to a decline of natural grassland in Kenya. (6 marks)
- The frequent outbreak of bush fires destroys the grass retarding its regeneration.
- The increasing human population / human encroachment into the grassland replacing them with settlement and cultivation land.
- Pests such as army worms / locusts destroy the grass reducing the rate of growth and regeneration.
- Frequent drought experienced in the country destroy the grass and the vegetation degenerate into a semi-desert type.
- Wild and domestic animals overgraze and cause stunted growth of grass. *any 3 × 2 = 6 marks*

c) Suppose you were to carry out a field study on the relationship between vegetation and altitude.
    i) State three objectives you would formulate for your study. (3 marks)
- To find out the types of vegetation at different altitudes.
- To find out the changing characteristics of vegetation with altitude.
- To find out the species of trees / grass at different height.
- To find other factors influencing vegetation distribution other than altitude etc. *any 3 × 1 = 3 marks*

    ii) State three methods you would use to record the information collected during the field study. (3 marks) - Taking photographs / video - Tallying - Field sketching.
- Tape recording. - Tabulation
- Labelling samples.
- Filling in questionnaires. *any 3 × 1 = 3 marks*

    iii) Name two types of maps you would draw to present your findings (2 marks)

- Density maps / choropleth / layer tinting.
- Distribution map.   *any 2 × 1 = 2 marks*

9.   a)   Explain the following processes of weathering.

i) Hydration.   (2 marks)

In hydration certain rock minerals absorb water thus expanding, this causes internal stress in the rock and it eventually disintegrates.

ii) Oxidation   (2 marks) Takes place in rocks that contain iron. The iron combines with oxygen forming iron oxides. Such rocks change colour and crumble easily. □   □

iii) Frost action   (2 marks)

- In temperate / high mountain areas, water may occupy cracks in the rocks during the day.
- At night the temperatures drop below freezing point causing the water to freeze and expand.
- This alternate freeze - thaw action we(2 marks) the) Described shown an exfoliation dome is formed.   (5 marks)
- In arid / semi-arid areas, there is large diurnal ranges of temperatures.
- During the day, a homogenous rock, intensively heated / at might the rock looses heat rapidly.
- The differential heating causes the outer layer to expand / contract faster than the inner layer.
- When this expansion and contraction takes place repeatedly, stress develops in the outer layer of rocks. Cracks appear on the surface layer.
- Eventually, the <u>outer</u> layer peels off.
- The peeling off leaves behind a rounded mass of rock known as exfoliation dome.   *5 × 1 = 5 marks*

 c) Explain three physical factors that enhance movement of materials along a slope due to gravity.   (6 marks) i) <u>Nature of materials</u>

- Heavy and large materials move faster on a slope as they are more likely to be overcome by gravity / thinly bedded layers have a tendency to move faster.

ii) <u>Angle of slope</u>

- The steeper the slope, the faster the rate of movement / where rocks are dipping steeply, movement is faster. iii) <u>Climatic factors / amount of water</u>
- The more saturated the rock / soil materials is, the more likely it is to move as water adds weight and lubricates / alternate freezing and thawing encourages movement.
- Bare surface are more likely to experience mass wasting because there is no vegetation to bind the materials together. iv) Earth movements
- Earth quakes / volcanic eruptions / isostatic adjustments cause vibrations which may trigger widespread movement of weathered rock materials.   *2×3=6marks*

d) i) Give two processes of rapid mass movement.

- Land slides
- Mudslides / mud flow
- Earth flows / earth slides.

ii) State four indicators of occurrence of soil creep in an area.   (4 marks)

- Telephone /fence poles that are inclined down the slope / bent tree trunks.
- Accumulated soil at the foot of a slope / behind obstacles such as walls / on roads / railways.
- Existence of bare rock / exposed upper slope.
- Presence of ribbed / stepped pattern across the slope.
- Presence of dipped rock strata in the direction of the slope.
- Presence of overhanging banks above roads / rivers.
- Presence of a slope retreat.   *4 × 1 = 4 marks*

e)   Explain the effects of mass wasting on the following

i) Tourism   (2 marks)

- Features created through mass wasting are tourist attractions.

ii) Soil fertility   (2 marks)

- Mass wasting facilities soil leading to soil degeneration / may lead to formation of fertile soil where such soils are deposited.

10. a)   i) What is a river divide.   (1 mark)

- It is a ridge / high ground that separates two or more rivers basins / the highest line of an interfluke.   *1 mark*

-
    ii) Describe three ways by which a river transports its load.   (6 marks)
- Traction process

    The large and heavy particles of the river load are rolled / dragged along the river bed.
- Saltation process.

    Hoping / hydraulic lifts particles that are not too heavy but cannot remain suspended in water are momentarily lifted by the water turbulence and at times dropped onto the river bed. -   Solution

    Soluble minerals are dissolved in the river water and carried away in solution.
- Suspension

    Light particles of the load are carried and maintained within the turbulence of flowing water.   *3 × 2 = 6 marks*
    b) Give the characteristics of a river in its old stage.   (7 marks)
- The widening of the valley through lateral erosion, creates an extensive area, where the river deposits its load especially during floods / flood plain.
- The speed of flow is low, the gradient of the plain is low.
- Due to the slow speed and the high rate of deposition, the rivers form pronounced meanders.
- Meanders become more pronounced with narrow necks which are eventually blocked by deposits to form meander cut offs / ox-bow lakes / formation of river terraces / cliffs.
- Increased deposition along the channels raises the river bed and may eventually form small islands / braided channel. Deposition along the bank of the river channel lead to formation of levees.
- The reduced speed and increased deposition blocks the river mouth forcing the river to form distributaries / delta

    any 7 points = 7 marks
    c) Describe drainage patterns below.
i) Superimposed.   (3 marks)
- The river systems develops on a rock structure that overlies a totally different one.
- The river valley cuts through the surface rock layers onto the underlying rocks.
- Gradually the surface rocks are removed and the underlying rocks now become exposed on the river bend. The river maintains its original direction of flow despite the new rock structure.
- The superimposed drainage bears no relationship to the existing rock structure.
ii) Centripetal.   (2 marks)
- The pattern develops in an area with a central basin.
- River drain into the depression from different directions.
    d) Explain three factors that lead to rejuvenation of a river.   (6 marks)
- Local uplift of the land / dynamic rejuvenation - leads to a change in the base level hence the river revives its erosive activities.
- Lowering of the sea level / eustatic rejuvenation - creates sharp breaks / knick points at the river mouth. This leads to a revived river erosion.
- Increase in a discharge / volume - raises the volume of the river thus increasing its erosive power.
- Presence of a lake, in the course of a river causes static rejuvenation as the river drops over the lower edge of the lake.
    2 × 3 = 6 marks

MAARA JOINT EXAMINATION
Kenya Certification of Secondary Education
GEOGRAPHY
Paper - 312/2
July/August 2015
Marking Scheme

SECTION A
Answer ALL questions in this section
1. a) Distinguish between regional trade and domestic trade.   (2 marks)
- Regional trade is the exchange of goods and services within a country while regional trade is the exchange of goods and services by the countries within the same geographical or economic regions. *2 marks*
    b) Identify three main levels of trade. (3 marks)
- Domestic / internal
- Regional
- International / external *3 × 1 = 3 marks*

2. a) Identify two coniferous trees found in Kenya.   (2 marks)
- Cypress
- Pines
- Firs
- Cedar
- Podo   *any 2 × 1 = 2 marks*

b) Describe three characteristics of coniferous forests.   (3 marks)
- Trees are softwood and light in weight.
- Trees species occur in pure stands
- Composed of evergreen trees characterised by needle-like leaves.
- Tree are tall and have straight trunks.
- Tree crowns are cone-shaped to prevent snow from accumulating on the branch.
- Trees have thick bars with a lot of rain to protect them from frost. -   Trees have shallow roots to tap water close to the surface.
- Trees mostly take a long time to mature. *3 × 1 = 3 marks*

3.   a)   Describe three physical factors favouring growth of Arabica coffee in Kenya.   (3 marks) - High rainfall
- High altitude between 900 - 2100 m above sea level. -   Moderate temperatures between 14° - 30°C -   Well drained soils.
- Deep volcanic soils. *3 × 1 = 3 marks*

b) Identify problems facing coffee farming in Kenya.   (3 marks)
- Attack of coffee plants by pests such as leaf minor which destroy the crop.
- Attack of coffee by diseases like coffee berry diseases and leaf rust which destroy the crop.
- Sometimes soils get quickly exhausted in coffee growing areas leading to poor growth of the crop.
- Prolonged drought in some parts causes the crop to have low yields.
- Expensive inputs e.g. fertilizers and insecticides causes farmers to incur losses when payments are poor.
- Delayed payments for the farmers.
- Sometimes the pay is low discouraging farmers. *3 × 1 = 3 marks*

4. a) What is soil conservation.   (2 marks)
- Soil conservation is a careful management / protection of soil against erosion / exhaustion. *2 marks*

b) State three farming methods that assist in soil conservation.   (3 marks)
- Ploughing along the contour.
- Controlling grazing. - Strip cropping
- Making terracees.
- Digging cut off drains / trenches / furrows across the slope.
- Planting cover crops.
- Mixed cropping / intercropping. -   Agro-forestry.
- Crop rotation
- Mulching. *any 3 × 1 = 3 marks*

5. a) Define the term Hinterland.   (2 marks)
        Is the area that serves and is served by a port.

b) State three factors that contribute to growth of Rotterdam as a major sea port.   (3 marks) - Deep harbours and canals.

- Strategic location in Europe.
- Availability of modern facilities.
  Large rich hinterland.   *3 × 1 = 3 marks*
  Answer question 6 and any other two questions from this section.

6. a) Using a scale of 1cm rep. 400,000 people, draw a population pyramid to represent the above data. (8 marks)

b) i) What is a population structure.   (2 marks)

Population structure is the composition of a given population in terms of age and sex at a particular time. (2 marks) ii) Give two primary sources of population data.   (2 marks)

- Sample survey -   Census
- Registration of births.
- Registration of deaths.*2 × 1 = 2 marks*

c) i) Name three types of internal migrations apart from rural-urban migration.(3 marks) -
Rural - rural

- Urban - urban
- Urban - rural *3 × 1 = 3 marks*

ii) Explain four ways of curbing rural-urban migration.   (8 marks)

- Decentralization of industries and taking them to rural areas.
- Improve roads and other infrastructure in the rural areas.
- Establish economic activities in rural areas e.g. plantation schemes.
- Improve social amenities in rural areas e.g. schools and hospitals.

d) Differentiate between the age structure of Kenya and Sweden.   (2 marks)

7.   a) i) What is industrialization. (2 marks)

- Industrialisation is the process through which a country establishes manufacturing industries. *2 marks*
      ii) State three measures the government of Kenya can take to attract industries to different regions.

(3 marks) -   Improving on infrastructure and social amenities -   Improving on security.

- Doing rural electrification
- Availing cheap land to investors.
- Formulating policies such as subsidises and incentives to rural industries.
- Providing financial aids in form of loans to potential industries.
- Creating awareness the to investors on investing locally. *3 × 1 = 3 marks*
      b) Explain how the following factors influence the location the location of industries.

i) Raw materials   (2 marks)

- The supply of raw materials must be steady.
- Locating industries near raw materials reduces transport costs. especially where they are bulky.
- Perishable raw materials should be near industries.   *2 × 1 = 2 marks*

ii) Government policy   (2 marks)

- Government may discourage the concentration of industries in one place for economic and political reasons.
- Decentralization of industries is done to open up the underdeveloped areas to reduce rural-urban migration.
- Some industries may be set up in a particular place because of political reasons.   *2 × 1 = 2 marks*

iii) Water sources.   (2 marks)

- Some factorise require plenty of water in their operations e.g. coffee.
- Water is needed to clean, cool machines.
- To run the machines.*2 × 1 = 2 marks*
      c) i) State four problems associated with industries in Kenya.   (4 marks)
- Pollution i.e. land, air and noise
- Rural - urban migration - Displacement of people - Neglect of agriculture.
- Can cause unemployment if industry collapses - Depletion of resources.
- Repatriation of profits
- High power charges.   *3 × 1 = 3 marks*   ii) State four characteristics of Jua Kali industries in Kenya.   (4 marks)
- Operated by individual / small groups.
- Require low capital investment.
- Use simple equipments if industry collapses.
- Use local / recycled raw materials.
- Use basic / simple skills.
- Operated in open/sheds.   *4 × 1 = 4 marks*
      d) Explain three factors which favoured the development of car and electronic industries in Japan. (6 marks)

-
- Japan is a rich country and therefore profits accrued from other industries such as ship building are invested in the development of other industries.
- Availability of skilled manpower which also dedicated to their development ventures.
- The rugged terrain which does not favour development of agriculture turning to industries.
  Abundant supply of water from nay rivers like Gawa and pacific ocean.
- Japan is accessible to leading sea routes therefore importation of raw materials and exportation of products to all parts of the world.
- Advanced technology hence high and efficient yields are realised. *3 × 2 = 6 marks*

8. a) One of the problems facing road transport in Kenya is high frequency of accidents. Explain four conditions of roads in Kenya which lead to accidents. (8 marks)
- Narrow roads where heavy traffic limit of ease of movement and overtaking the potholed sections of the roads may cause tyre burst/ vehicle breakdown.
- The sharp bends may cause vehicles to veer off the roads.
- The narrow bridges may cause vehicles to crash.
- Sub-standard surfaces may cause vehicles to skid / overturn.
- Un-availability of pedestrian paths / sidewalks may cause pedestrians to walk on the roads.
- Dusty roads may reduce visibility leading to accidents.
- Muddy roads during rainy seasons may cause accidents. *4 × 2 = 8 marks*

    b) i) Identify two benefits if more commuters in urban centres in Kenya used public transport. (2 marks) - Reduction in traffic jams.
- Save on money used to import petroleum.
- Crime reduction since commuters would be reaching home early. - Creation of employment in transport sector.*2 × 1 = 2 marks* ii) Explain three reasons why road transport is used more than air transport is in East Africa. (6 marks) - It is cheaper to construct / maintain.
- Flexible.
- Roads can be used by a wide range of transport agents / more versatile.
- Motor vehicles are cheaper to buy and maintain than crafts.
- Fares are lower than of air transport .
- Skills required to operate aircrafts are higher and rare than those required to operate motor vehicles. *3 × 2 = 6 marks*

    c) i) Draw an outline map of Great Lakes and St. Lawrence seaway of Canada and USA.
    (2 marks) ii) On the outline map mark and name -Ports of Montreal and Quebec.(3 marks)
    -New York state Barge of Erie Canal (1 mark)
    -Lake Ontaria and Michigan. (2 marks)

9. a) Name four geothermal power sites in Kenya. (4 marks)
- Olkaria
- Eburur
- L. Bogoria *4 × 1 = 4 marks*
    b) State four factors that influenced the location of Olkaria Geothermal Unit. (4 marks)
- The area had a small population hence less cost of resettling people.
- Presence of many geysers to generate the necessary steam to run turbines.
- There was need to open up the area since it was remote.
    c) i) State four factors that limit the expansion of Geothermal Power Production in Kenya. (4 marks) - Inadequate capital for investment.
- Inadequate skilled labour.
- Inadequate technology.
- Government bureaucracy and political interference.*4 × 1 = 4 marks* ii) Explain five ways in which Kenya has benefited from development of the seven Forks Dams HEP projects. (10 marks)
- It has led to control of floods in the lower parts of river Tana, thus reducing the incidents of loss of life and farm produce in the area.
- The dams are used for generating electricity which is used for industrial and domestic purposes.
- The dams are tourists attractions which generates foreign exchange for the country.
- The scheme led to the development of industries thus creating employment opportunities.
- Some of the dams in the scheme provide water for irrigation thus improving agricultural production.
- The reservoirs provide fishing grounds which supply fish to the local people.

-
- It has led to the improvement of roads making the area more accessible.
- It has led to the reduction of importation of power, thus saving the foreign exchange.
- The dams have provided useful sites for educational purposes.   *any 5 × 2 = 10 marks*
    d) State three benefits of rural electrification in Kenya.   (3 marks)
- Encourage setting up of industries in the rural areas thus stimulating decentralization of industries.
- It would reduce cutting down of trees as electricity would be available for domestic use.
- It would attract / improve social amenities in rural areas reducing the need for people to move to urban centres.
- More people would invest in rural areas which would lead to higher standards of living.
- It would encouraged development of horticultural farming / to have ideal storage of perishable products.

10. a)   Name
i) Three areas in Kenya where nomadic pastroralism is practiced.   (3 marks) Kajiado, Narok, Turkana, Samburu, Pokot.*3 × 1 = 3 marks*
ii) Three types of animals kept by pastroralists.   (3 marks)
- Sheep, goats, cattle, camels.*3 × 1 = 3 marks*
    iii) State three characteristics of animals kept by pastoralists.   (3 marks)
- Native breeds / indigenous.
- Many types are kept.
- Weakened by diseases.*3 × 1 = 3 marks*
    b) i) Explain four problems that face nomadic pastoralists in Kenya.   (8 marks)
- Acute shortage of grass and water due to inadequate rainfall.
- Diseases like foot and mouth which spread very fast due to the communal nature of herding.
- Overgrazing due to the large herds of animals.
- Constant raids from the neighbouring communities makes the area insecure..
- Poor stock management which leads to poor or low quality animals.
- Poor means of transport within the areas, limits the market. -   The native cattle breeds yield low amount of milk.*4 × 2 = 8 marks*   ii) Explain four ways in which the government of Kenya assists nomadic pastoralists to improve the quality of their livestock.

(8 marks)
- The government has set up demonstration ranches to educate the pastoralists on better ways of keeping livestock /cattle dips have been constructed to control posts.
- Extension services are provided to give advice to the pastoralists.
- Boreholes and dams have been constructed to provide water for their livestock.
- Roads have been constructed to enable the pastoralists to transport their produce to markets.
- Through formal education, the pastoralists have learnt the advantages of keeping management sizes of herds.
- The government encourages group ranching to enable the pastoralists to view livestock keeping as a commercial undertaking.

KERICHO SUB-COUNTY JOINT EXAMINATION
Kenya Certificate of Secondary Education
312/1
GEOGRAPHY
Paper 1
July/August 2015 <u>SECTION</u>
A:

1. **a)** Mention two theories advanced to explain the origin of the earth. (2 marks) **b)** State three reasons why the interior of the earth is every hot. (3 marks) **2.** **a)** State three conditions for the formation of an artesian basin. (3 marks) **b)** Name two ways in which underground water reaches the surface. (2 marks) **3. a)** Name two planets without satellites in the solar system. (2 marks) **b)** State three effects of the earth's movement around the sun. (3 marks) **4. a)** Name two main types of earth movements. (2 marks) **b)** Differentiate between revolution and rotation. (2 marks) **5. a)** State three effects of revolution of the earth. (3 marks) **b)** The following figure shows a fold.
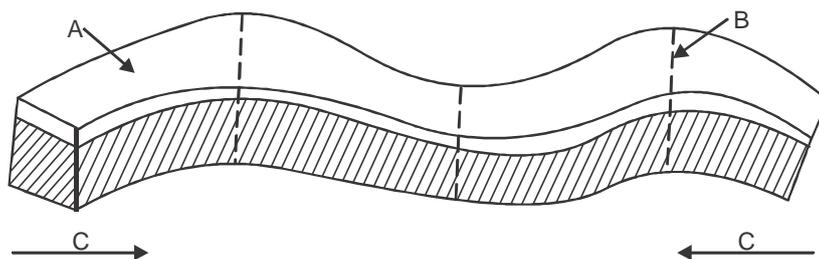
Name the parts marked A, B and C (3 marks)

SECTION B :
Answer question 6 and any other two questions from this section.

6. **a)** Study the map extract of Migwani sheet 151/1 provided and use it to answer the following questions.
i) Identify two relief features found in grid square 9865. (2 marks) ii) Measure the distance of dry weather road from grid reference 074980 to 130986 giving your answer in km. (2 marks) iii) Give the six figure grid reference for the Kauma dam. (2 marks) **b)** i) Calculate the bearing and direction of the school at grid square 0965 from the watertank at grid square 1169. (2 marks) ii) Citing evidence from the map give three social activities carried out in the area covered. (6 marks) **c)** Enlarge the area from gird square 100800 and 130800 to 100840 and 130840 by two and on it mark :
 i) Air photo principal point   ii) Road
iii) River Ngoo   (5 marks) **d)** Describe the drainage of the area covered by the map. (6 marks)
7. **a)** i) What is a rock ?   (2 marks) ii) Explain the process of formation of mechanically formed sedimentary rocks. (5 marks) iii) Give three types of mechanically formed sedimentary rocks. (3 marks) **b)** Explain three ways in which rocks are significant to economy of Kenya. (6 marks) **c)** Students from your school carried out a field study on the type of rocks.
i)   One of the rock samples they collected in coral. Give three uses of this type of rock. (3 marks) ii) Give three methods of data collection they may have used during their study. (3 marks) iii) State three problems they are likely to have encountered during the field study. (3 marks)
8. **a)** i) Define a desert.   (2 marks) ii) Identify four features resulting from water action in desert areas.   (2 marks) **b)** Explain three factors that influence wind deposition in desert areas. (6 marks) **c)** With the aid of well labelled diagrams describe the formation of :
 i) Barchans   (6 marks) ii) Zeugens   (5 marks) **d)** State four negative effects of deserts on human activities. (4 marks)
9. **a)** i) What is a lake ?   (2 marks) ii) Name three ways through which lakes are formed.   (3 marks) iii) List three sources of lake water.   (3 marks) **b)** By use of a diagram describe how lake Victoria was formed.   (5 marks)
c) Briefly explain two reason why some lakes in the Rift Valley have fresh water.   (4 marks)
d) State three economic significance of lakes.   (3 marks) **e)**   Students from your school intends to carry out a field study on lakes.
i)   State one objective for their study. (1 mark)
ii) Identify two methods they will use to record data collected. (2 marks)
iii) Which human activity might they have found to be affecting the lakes. (2 marks)
10. a) i) What is the definition of ground water. (2 marks)
        ii) Name two of the sources of ground water. (2 marks)

b) The diagram below shows the underground features in karst landscape.Use it to answer question (i)
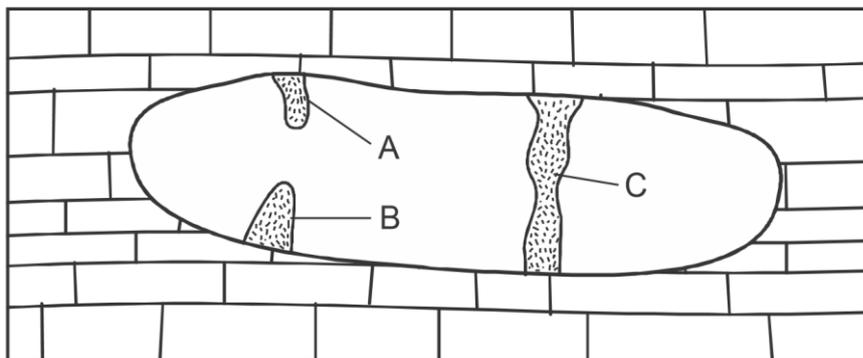
i)   Name the features marked A, B and C   (3 marks)

    ii) Describe how feature B is formed.   (3 marks)

c) Explain four ways in which ground water is of significance to human activities.   (8 marks)

d) Students went for a field study in a limestone area.

    i) What problems are they likely to face while in the field.   (3 marks)

    ii) State two of the surface features they identified.   (2 marks)

    iii) The two features you have stated in d(ii) above explain how they were identified.   (2 marks)

KERICHO SUB-COUNTY JOINT EXAMINATION
Kenya Certificate of Secondary Education
312/2
GEOGRAPHY
Paper 2
July/August 2015

<u>SECTION A:</u>
Answer all the questions in this section.
1. a) **Distinguish** between fishing and fisheries. (2 marks)   **b)**
State three significance of fishing in Kenya. (3 marks)
2. a) Define horticulture. (2 marks)
    b) **Identify three** problems facing horticulture farming in Kenya. (3 marks)
3. a) **Name two** renewable sources of energy. (2 marks)
    b) **State three** measures that the governance of Kenya has taken in order to manage energy. (3 marks)
4. a) **Give three** economic factors that influence settlement. (3 marks)
    b) **Describe two** problems facing the city of Nairobi arising from rapid population growth. (2 marks)
5. a) What is transport ? (1 mark)
    b) List four communication services that are available in Kenya. (4 marks) <u>SECTION B :</u>
    Answer question six and any other two questions from this section.
6. The table below shows the principal crops grown by area in Kenya between 1981 and 1984 in „000 of acres

Crop / Year	1981	1982	1983	1984
Wheat	2206	2570	2483	2803
Barley	5302	5953	6310	6207
Maize	1215	1015	904	1017
Potatoes	787	714	665	780

a) i) Draw a cumulative bar graph to represent the data given using the scale 1cm to represent 1,000,000 acres. (7 marks)   ii)
State three disadvantages of using cumulative bar graphs to represent data. (3 marks) **b)** i)
State four physical factors necessary for the growing of sugarcane. (4 marks)   ii)
Describe sugarcane production from harvesting to marketing. (7 marks) **c)**
List four uses of sugar. (4 marks)
7.   a) i) **Differentiate** between visible and invisible trade. (2
marks)   ii) **List three** major imports to Kenya from China. (3 marks) **b)**
Explain four factors that influence international trade in Kenya. (8 marks)
c) **State four** ways in which trade is of significance to Kenya.   (4 marks)
d) **Explain four** benefits which Kenya has derived from being a member of COMESA.   (8 marks)
8.   a) i) What is forestry ? (2 marks)
ii) **State four** ways of conserving forests in Kenya. (4 marks)   **b)**
i) **Name** the forests reserves marked X, Y and Z
 ii) **Explain four** factors that favour the growth of natural forest in Kenya.   (8 marks)
c) **Explain four** measures being taken by the government of Kenya to control human encroachment \on forested areas.
        (8 marks)
9.   a) i) **State four** characteristics of nomadic pastoralism. (4
marks)   ii) **Name three** beef cattle breeds kept in Kenya. (3 marks) **b)**
Compare beef farming in Kenya and Argentina. (8 marks)
c) **Explain three** problems facing beef farming in Kenya.   (6 marks)
d) **State four** measures that the government of Kenya has taken to improve beef farming. (4 marks)
10. a) What is domestic tourism ? (2 marks) **b)** i)
Give four inland tourist attraction in Kenya. (4 marks)   ii)
State five problems associated with tourism in Kenya. (5 marks) **c)**
Explain four physical factors that favour tourism in Switzerland. (8 marks)
d) **Explain three** economic importance of tourism in Kenya.   (6 marks) **KERICHO SUB-COUNTY JOINT**
EXAMINATION
   GEOGRAPHY
   Paper 1

July/August 2015

MARKING SCHEME

1. a) Nebula cloud theory   Passing
star theory
Big bang theory   *any 2 x 1 = 2mks*
   b) Original heat was retained during its formation
      Immense pressure from overlying rocks generate heat
      Radioactive minerals generate heat   *3 x 1 = 3mks*

2. a) Conditions for formation of artesian basin
      i) Region of highly folded rock to forma a
depression   ii) A permeable rock lying between
impermeable rocks
      iii) Both ends of the permeable rock should be exposed to a region of sufficient   *3 x 1 = 3mks*
rainfall b) i) Springs   ii) Wells

      iii) Boreholes   *any 2 x 1 = 2mks*

3. a) Two planets without satellites in the solar system
 - Mercury
 -      Venus   *2 x 1 = 2mks*
 b) Three effects of the earth‟s movement around the sun
 ☐   changes in the position of the midday sun at different times of the year
 ☐   varying lengths of day and night
 ☐   the four seasons
 ☐   causes lunar eclipse   *any 3 x 1 = 3mks*

4. a) Two main types of earth movements
 ☐   Horizontal / orogenic / lateral earth movement
 ☐   vertical / epeirogenic earth movements b) Effects of revolution of the earth   *2 x 1 = 2mks*
 ☐   it causes four seasons
 ☐   it causes varying lengths of day and night at different times of the year

 ☐   - it causes changes in the altitude of midday sun at different times of the year   *3mks*

5. i) Differentiate between revolution and rotation
      Revolution is the movement of the earth round the sun while rotation is the movement of the earth on its own axis
                                                               2 x 1 = 2mks

 ii) A - limb
      B -
axis
      C - compressional force   *3 x 1 = 3mks*

6. a) i) - hill
  - river valley   -
con   ii) 6km ±0.1
iii) 902623
      b) i) 201 SW
      ii) - medical service - Gwani health centre
         - education - numerous schools
         - religious - several churches
         - recreational service - Gwani rest house

c)

River   1mk
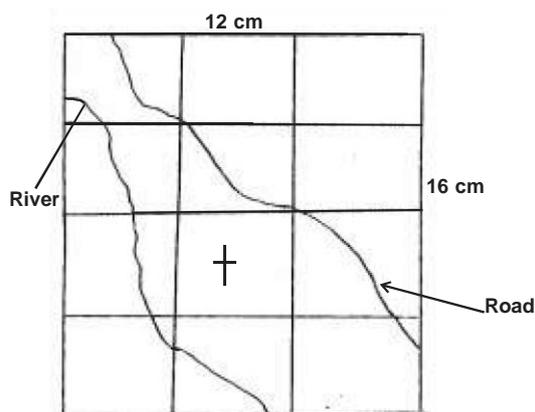
    Road   1mk

    Air photo principal   1mk d) The area has several rivers / streams

    The major rivers in the area covered by the map are Ikoo and Ngoo

    Most rivers have dendritic drainage patterns

    Several river valleys

    Most rivers are flowing from NW towards southern part /

SE **7.** a) i) What is a rock ?

    A rock is a hard solid and compact mass made of particles of one or more

minerals**2mks**   ii) Explain the process of formation of mechanically formed sedimentary

rocks

- Weathering or erosion takes place previously existing rock
- The sediments are then transported by wind, water or moving ice
- They are then deposited in layers; strata   **5mks**   iii) Give three types of mechanically formed sedimentary rocks
- Arranaceous rocks e.g. sandstone
- Agriceous rocks e.g. shell
- Rudaceous e.g. breccia   **3mks**

    b) Explain three ways in which rocks are significant to economy of Kenya

- some rocks formation are tourists attraction e.g. Ku Mikai and hence earn foreign exchange
- provide employment and are source of income to man people in activities e.g. quarrying and mining
- rocks contain minerals which when mined earn income
- some rocks are used in building and construction
- some stones such as Kisii soapstone, marble are used to make beautiful carving. These are sold to earn income ☐ fine particles fill in between large particles
- overtime particles are compressed and consolidated due to weight of materials to form a hard compact rock**6mks**   c)
  - i) Three uses of this type of rock
- calcium carbonate is a raw material for cement
- used by polyps to build exoskeleton which leads to formation of petroleum underneath
- it is used in sugar industry as a softener
- - used in glass manufacturing industry   **3mks** ii) Three methods of data collection
  - Direct observation
  - Secondary source
  - Administering questionnaire
  - Interviewing
  - Experimentation **3mks**   iii) Three problems they are likely to have encountered during the field study
- Slipping and falling
- Bad weather e.g. heavy rainfall
- Attacks by wild animals such as snakes
- Poor transport due to impassable roads
- Tiredness / fatigue due to steepness of the area
- Students are likely to fall sick   **3mks**

8. a) i) A desert is an expansive ü barren / unproductive land with sparse ü vegetation *2 x 2 = 2mks* ii) Features of water action

- inselbergs
- messas and buttes
- gorges
- wadis
- canyons
- playas and Salinas *any 4 x ½ = 2mks* iii) Factors influencing wind deposition
- Obstacles on the path of the prevailing winds which reduce the speed of wind thus deposition
- Amount of load, wind carrying a heavy load is likely to deposit than wind carrying light load
- Varying in weather conditions; flash rains force wind to deposit its load
- Nature of desert landscape, rugged landscape is a barrier to moving wind therefore wind deposits its load *any 3 x 2 = 6mks* c) i) Barchans

From when wind deposits sand around an obstacle ü such as a rock or vegetation
Continued ü deposition leads to enlargement of the mound of sand. Further push by wind causes sand deposits to extend to form horns ü which grow on the sides giving it a crescent ü shape. A windward side form a gentle ü slope due to gradual wind deposition Leeward side is steepened ü by wind ü eddies. They form either in single or in groups. These crescent shaped mounds form barchans
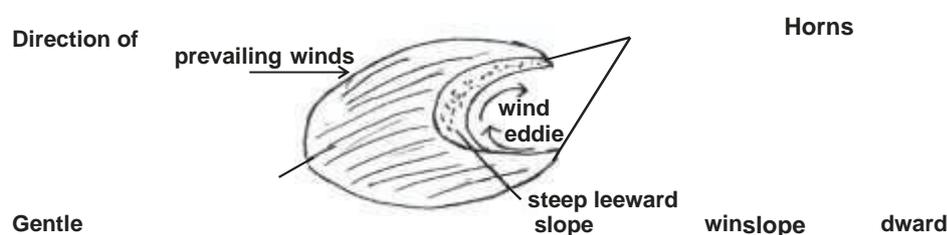
ii) Zeugen

Forms where a mass of horizontally lying rock alternates soft and hard rocks
Weathering breaks, deepens and widens rock joints to form furrows on the upper harder layer
Wind abrasion deepens and widens the cracks into the softer rocks
The softer rocks are eroded faster tan the hard rocks
Ridges and furrows result from where wind has removed soft loose particles
Hard rocks stand as ridges known as Zeugens
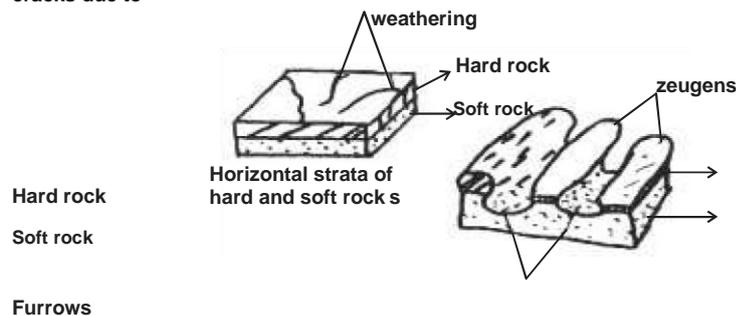
d) Negative effects of desert landscapes

- Sand dunes are a barrier to transport and communication
- High temperatures impede agricultural activities
- Sand derived from storms is infertile and discourages agriculture
- Mobile dunes bury settlements, communication lines and farms
- Arid environments are deficient of water making it uninhabitable to humans
- Flash floods destroy settlements; uproot vegetation and farms deep gulley *any 4 x 1 = 4mks*

9. a) i)What is a lake ?

A lake is a mass of water which occupies a basin, depression or a wide hollow on the earth"s surface *1 x 2 = 2mks* ii) Ways through which lakes are formed

- ☐ Earth movement
- ☐ vulcanicity
- ☐ Erosion
- ☐ Deposition
- ☐ Human activities
- ☐ Meteorites
- ☐ By mass movement   *first three correct 3 x 1 = 3mks*   iii) <u>Sources of lake water</u>
- ☐ Rain water
- ☐ Rivers
- ☐ Underground water
- ☐ Melting ice   *first three correct 3 x 1 = 3mks*   b) <u>By use of a diagram describe how lake Victoria was formed</u>

Lake Victoria was formed as a result of earth movement (downwarping) which resulted into formation of a basin like depression ü . The land to the West and South was uplifted ü therefore making the rivers flowing westward to start flowing eastward due to back   tilting. The reversal of the drainage caused river water to flood their   valleys and fill the depression to form a lake ü
5mks
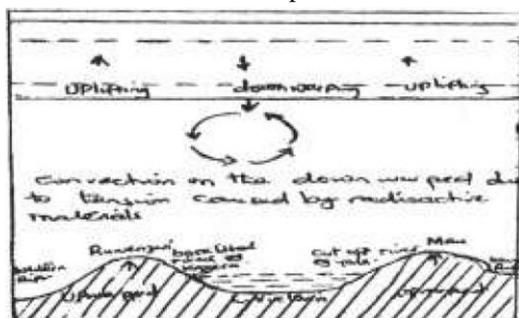
formation of L. Victoria

c) <u>Reasons why some lakes in the Rift Valley have fresh water</u>

- ☐ They have surface outlets / rivers through which excess salts deposits are carried away
- ☐ Some have underground outlets which drains the salts that would have accumulated at the bed
- ☐ Some experience low rates of evaporation because they are located in low temperature areas
- ☐ The lakes have regular influx of fresh water which dilutes the salts
- ☐ Some of the lakes are located in areas of high rainfall which keeps the water fresh.   *first two correct 2 x 2 = 4mks*   d) <u>Economic significance of lakes</u>
- ☐ Lakes provide water for domestic and industrial use
- ☐ Lakes provide water for irrigation
- ☐ Some lakes are sources of mineral e.g. Trona in L. Magadi
- ☐ Lake shoves are sources of sand which is used in the construction industry
- ☐ Lakes are used to generate HEP
- ☐ Lakes are used for transport
- ☐ Lakes acts as tourist attraction
- ☐ Lakes are used for fishing *mark the first three correct 3 x 1 = 3mks* e) i) <u>State one objective for this study</u>
- ☐ Mark any relevant as regards to the lakes e.g.
- ☐ To find out the importance of lakes
- ☐ To find out problems affecting lakes
- ☐ To find out the sources of water in the lake   *1mk*   ii) <u>Methods they will use to record the data collected</u>
- ☐ Drawing sketches
- ☐ Note taking
- ☐ Tape recording
- ☐ Photographing   *mark the first two correct 2 x 1 = 2mks*   iii) <u>Human activity they might have found to be affecting the lakes</u>
- ☐ Agriculture excessive irrigation reduces the volume of the lake. Chemicals used in the farms pollute the water ☐ Chemicals used in the farms pollute the water
- ☐ Industrialisation: disposal of industrial wastes pollutes the lake water

⬜   Deforestation may causes the lake to be silted

⬜   Introduction of weeds   *mark the first 2 x 1 = 2mks*

10. a) i) What is the definition of ground water

This is the water that exists below the surface of the earth / ground water is contained in the available air spaces in the soil and the rocks beneath the surface, which are above the impermeable layer   *2mks*   ii) Name two sources of ground water

⬜ Rain water ⬜ Melt water

⬜ Lake and sea water

⬜ Magmatic water / plutonic water   *Mark first two 2mks*   b) i) Name the features marked A, B and C

A - stalactite

B - stalagmite

C – pillar   *3mks*   ii) Describe how feature B is formed

⬜ Water drips from the stalactite to the floor of the cavern

⬜ The water contains calcium carbonate

⬜ The water evaporates, leaving behind small quantity of calcium carbonate which grows upwards to form a cone-shaped mars of calcium carbonate, called stalagmite   *3mks*   c) Ways in which groundwater is of significance to human activities

⬜ Source of rivers - many springs are sources of rivers or their tributaries

⬜ Source of water - wells, spring, boreholes and even cases provide water which is used in homes / industries

⬜ Agriculture - ground water is used for irrigation

⬜ Development of settlements in some areas is close to springs / rivers / oases

⬜ Provision of hot water, in some countries hot springs are tapped and the water pumped into houses through pipes e.g. ice land, this warms the houses during cold season

⬜ Tourist attraction - the hot springs are seen by mist / battling in hot water that cures skin infection bring income

⬜ Source of minerals - at the mouths of many hot springs valuable mineral salts are deposited can be exploited for economic gain   *mark first four x 2 (well explained) 8mks*   d) Students went for a field study in a limestone area

i) What problems are they likely to face while in the field

⬜ Uneven / rough terrain difficult to walk around

⬜ Rainfall will hinder the study

⬜ Very high temperature that would make the researchers uncomfortable

⬜ If its dry, dusty which would hinder visibility

⬜ Difficult in identifying features   *any three mark (3mks)*   ii) The surface features they identified

⬜ grikes

⬜ dry valleys

⬜ polje

⬜ clints

⬜ dolines / dolina

⬜ gorges

⬜ swallow holes / sink holes

⬜ uvala   *mark first two x 1 = 2mks*   iii) Features you have stated in d(ii) above explain how they were identified

⬜ Grikes - are irregular gullies

⬜ Clints - are limestone blocks swallow holes / sink holes - are vertical holes in the ground through which rain water or even river water disappears

⬜ Dry valleys - is part of a river valley in which water is no longer flowing

⬜ Dolines / dolina - is a round or elliptical hollow on the surface of a limestone region formed by merging of several small hollows

⬜ Uvala - is a depression on the earth¨s surface, larger than a doline

⬜ Polje - is the largest surface depression formed by solution in limestone regions ⬜ Gorges - has sides that are irregularly shaped

Mark for the correctly named features in d(ii)   *2mks* **KERICHO SUB-COUNTY JOINT EXAMINATION**

GEOGRAPHY

Paper 2

July/August 2015

MARKING SCHEME

SECTION A :
1. a) Distinguish between fishing and fisheries

 Fishing is the act of catching fish and other aquatic animals while fisheries are places where fish are caught in large numbers
2 x 1 = 2mks
b) Significance of fishing in Kenya
- fishing has reduced the over-reliance on a few economic resources / has led to diversification of the economy - it is a source of food to many Kenyans
- has created many jobs to many Kenyans
- when fish is exported the country earns foreign exchange
- fishing has led to development of industries that make nets / fishing lines and those that use fish as raw materials
- fishing has led to development of infrastructure e.g. roads thus opening up remote areas e.g. the road to L. Turkana
1 x 3 = 3mks
2. a) Define horticulture.

 Horticulture is the cultivation of fruits, vegetables and flowers for sale *2 x 1 = 2mks*   b) Identify three problems facing horticulture farming in Kenya.
- impassable roads during the rainy season leading to destruction of horticultural produce
- most vehicles used to transport horticultural produce do not have refrigeration facilities causing the produce to decline in quality
- insufficient marketing systems has led to waste as some produce rots in the farms
- high cost of inputs has reduced profits to the farmers
- stiff competition from other countries has reduced the market for Kenya farmers
- pests and diseases e.g. late blight destroy crops e.g. tomatoes
- inadequate capital for some individual farmers means that they have to engage middlemen reducing their profits
1 x 3 = 3mks
3. a) Name two renewable sources of energy.
- the sun
- waves and tides
- wind
- geothermal steam
- biomass
- water
- wood
- animals   *1 x 2 = 2mks*
b) State three measures that the governance of Kenya has taken in order to manage energy
- encouraging the use of alternative sources of energy especially the sun   and biomass
- development of wood fuel programmes through afforestation, reafforestation and the planting of fast growing trees
- encouraging people particularly those in rural areas to use energy saving jikos
- encouraging management of existing forests / banning logging etc.*1 x 3 = 3mks*
4. a) Give three economic factors that influence settlement.
- Employment opportunities. People move to urban centres to look for jobs
- Social amenities. People migrate to urban centres because there are social amenities there
- Mining activities also influence development of settlement
- Establishment of manufacturing factories may also lead to growth of settlements
- - Roads, especially road junctions have led to establishment of settlement due to ease of transport   b)   *1 x 3 = 3mks* Describe two problems facing the city of Nairobi arising from rapid population growth.
- Traffic congestion leading to traffic jams on the streets
- Unemployment caused by the influx of people from rural areas
- Inadequate housing has led to the growth of slums
- Pollution from vehicles, poor waste disposal is a serious problem
- - Crime brought about by the high rate of unemployment is very common   *1 x 2 = 2mks*
5. a) What is transport

 Transport is the physical carriage and movement of goods and people from one place to another   *1 x 1 = 1mk*
b) List four communication services that are available in Kenya.
- telephone services through land lines and mobile phones
- telex services
- telegraph services
- paging services

- radio communication services   *1 x 4 = 4mks*

SECTION B

6. a)   i) **See graph** ii) State three disadvantages of using cumulative bar graphs to represent data.
- are relatively more difficult to construct than simple bar graphs because they involve calculations of the cumulative totals
- The number of components that can be represented by a single bar are limited since very long bars are difficult to compare
- It is not easy to determine the actual values of individual components apart from the first one
- Fluctuations in production over a period of time are not easy to see at a glance   *1 x 3 = 3mks* b) i) State four physical factors necessary for the growing of sugarcane
- Warm climate with temperatures ranging between 21°C and 27°C
- Rainfall of between 1250mm and 2000mm distributed throughout the year
- Dry season prior to harvesting to increase accumulation of sugar in the cane and for ease of harvesting and transportation - Well drained soils
- Gently sloping land for ease of mechanisation
- Sugarcane does well at low altitudes up to 1600m above sea level*1x 4 = 4mks*

     ii) Describe sugarcane production from harvesting to marketing.
- The mature cane is cut using pangas
- It is then transported to the factory by tractors / trucks
- The cane is weighed
- It is washed
- Then it is cut by machine into short pieces
- The pieces are crashed to squeeze out the juice
- The juice is put into a clarifier where the juice is separated from the mud
- The juice put into boilers (evaporators) where it is boiled with lime until it turns into syrup
- The syrup forms a dark brown mixture of molasses and sucrose crystals called massecuite
- The massecuite is put into open tanks (crystallizers) where sugar crystals grow
- The massecuite is then put in centrifugers where the crystals are separated from molasses
- Most of the sugar produced in Kenya is sold to wholesalers while the rest is sold to sugar related industries where it is used as a raw material   *1 x 7 = 7mks*   c)   Uses of sugar
- As a sweetener in foods and beverages
- used in the manufacture of sweets, chocolates, spirits, soft drinks and juices
- used as a sweetener in the food canning industry
- The brown coarse sugar is used in the manufacture of (local) brews
- Molasses is used to manufacture ethanol, acetone and ethylacetate
- The filter cake is used as manure
- Molasses is used as a sweetener for livestock feeds   *4mks*

7. a) i) Differentiate between visible and invisible trade.
     Visible trade refers to the sale / exportation of tangible goods while invisible trade refers to the provision of services which can earn foreign exchange without the transfer of goods from one country to another   *2 x 1 = 2mks*   ii) List three major imports to Kenya from China.
- textiles
- pharmaceuticals
- industrial machinery
- vehicles
- electronics
- motor cycles
- tuk tuks
- - household goods   *1 x 3 = 3mks*   b) Explain four factors that influence international trade in Kenya.
- Differences in natural resource endowment. Kenya exports what it is able to produce cheaply and imports what it does not produce
- Population - Kenya's population provides a market for imported goods and provides the labour needed to produce its exports
- Stage of economic development. Kenya mainly exports agricultural produce and minerals in unprocessed farm. With industrial development Kenya then process its produce before exporting them
- Demand and supply. As a developing country, Kenya imports a lot of manufactured goods while exporting mainly agricultural products and some minerals
- Trading blocs. Kenya trades more with countries with
- Political relationships. Kenya trades more with countries which have good political relationships e.g. China
     2 x 4 = 8mks
     c) State four ways in which trade is of significance to Kenya.

- Trade encourages development of industries and hence economic growth
- Industrial growth. A high demand for goods stimulates industrial growth
- Trade enables Kenya to earn foreign exchange from the exports of products
- Earnings from exports enables the country to improve / develop its infrastructure e.g. roads
- The Kenya government earns revenue from taxes paid by businesses
- Domestic trade has helped to create job opportunities which employ many Kenyans
- Trade stimulates specialisation which leads to production of quality goods
- Foreign trade has enabled Kenya to cooperate with other trading partners which has fostered harmony, international understanding and cooperation with her trading partners
- Trade has enabled the country to exploit her existing resources
- Kenya‟s trade with other countries has ensured availability of a wide range of commodities to the consumers
         1 x 4 = 4mks

d) Explain four benefits which Kenya has derived from being a member of COMESA.
- increased economic growth. Kenya‟s exports to member states increased leading to increased economic growth
- industrial development. Trade with COMESA countries has enabled the country to develop industries that produce more goods for the expanded market
- Employment. The increased industrial development has created many jobs for Kenyans
- variety of goods. The reduced tariffs has enabled Kenyans to have a variety of goods
- the increased trade with COMESA countries has enabled Kenya to improve its infrastructure hence stimulating further
                    production activities   *2 x 4 = 8mks*

8. a) i) What is forestry ?
        The science of developing and managing forests   *2 x 1 = 2mks*   ii) State four ways of conserving forests in Kenya
- Afforestation and reafforestation
- Legislation - enacting laws to prohibit cutting down of trees
- Creation of a department of forestry to deal with conservation and management of forests
- Establishment of Nyayo tea zones to protect some of the indigenous forests
- Forest research stations have been established to research on tree species and diseases
- encouraging the use of alternative source of energy other than wood fuel to reduce cutting down of trees
- Creating public awareness - programmes on forest conservation through the media to gain their support *1 x 4 = 4mks*   b) Name the forest reserves marked X, Y and Z
        X - Mau West
        Y - Mt. Kulal
        Z - Erabuko Sakoke   *1 x 3 = 3mks*   ii) Explain four factors that favour the growth of natural forest in Kenya
- High rainfall - encourages growth of trees
- Deep well drained fertile volcanic soils that allow roots to penetrate deep in the ground
- Moderate to high temperatures that allow the growth of variety of trees
- gazettement of forest areas hence prohibiting encroachment
- Some areas are steep and rugged thus discourages settlement and allow for forests to grow
- High mountain e.g. Mt. Keya experience cool climates which enables coniferous trees to flourish   *2 x 4 = 8mks* c) Explain four measures being taken by the government of Kenya to control human encroachment on forested areas
- -gazetttement of forest areas to reduce encroachment by the people
- evicting people who have encroached - inorder to rehabilitate the forests
- educating the public on the importance of conserving forests to gain their support
- enacting / enforcing laws to prohibit cutting of trees within the gazetted areas
- employing forest guards to patrol forest reserves and report illegal activities
- Encouraging people to use other sources of energy inorder to reduce demand for firewood
- Encouraging people to practice agroforestry to avoid depending on natural forest products   *2 x 4 = 8mks* **9.** i) Characteristics of nomadic pastoralism
- moving seasonally with animals in search of pasture and water
- Uncontrolled breeding
- Large herds of animals are involved
- Traditional breeds are kept
- Their products are mainly meat
- Communal land ownership
- Little / no scientific management involved
- Production is low   *1 x 4 = 4mks*   ii) Beef cattle breeds kept in Kenya
- Zebu

- Borana
- Aberdare Angus
- Hereford
- Galloway
- Shorthorn
- Charolais   *1 x 3 = 3mks*   b) <u>Compare beef farming in Kenya and Argentina</u>
- in both countries breeds kept are the same
- in both countries cattle are kept in ranches
- in Kenya beef farming is done in semi-arid areas while in Argentina it is kept all over the country
- in both countries some of the products are meant for export   *2 x 4 = 8mks*   c) <u>Explain three problems facing beef farming in Kenya</u>
- Shortage of water and pasture during dry season
- pests and diseases such as tsetsefly and East coast fever which kill the animals -   poor transport in the beef farming areas which affect the quality of products
- keeping of large herds of cattle by most farmers lowers the quality of products
- inadequate capital especially in remote areas
- low purchasing power of the people in pastoral keeping areas *2 x 3 = 6mks*

d) <u>Measures that have been taken by the government of Kenya to improve beef farming</u>
- building cattle dips to control diseases ad pests
- employing extension officers to teach farmers on best ways of beef farming
- Construction of roads - in the areas to ease transportation of products
- Establishment of KMC to market their products *1 x 4 = 4mks*

10. a) <u>What is domestic tourism ?</u>
          Practice of making a trip within ones country for education purposes, business or pleasure   *2 x 1 = 2mks* b) i)
<u>Give four inland tourist attraction in Kenya</u>
- Fauna and Flora (wildlife)
- national parks
- snow capped Mt. Kenya
- volcano features e.g. Longonot (hot springs)
- Rift valley lakes
- the great Rift valley historic monuments
- national museums
- variety of cultures
- accommodation and transport facilities *1 x 4 = 4mks*   ii)   <u>Five problems associated with tourism in Kenya</u>
- Cultural erosion
- Political destabilisation by some tourists
- National doubts to meet expectations
- Decline in agriculture
- Destruction of natural habitat
- Disturbance to wild animals
- Increase in school drop out
- led to spread of diseases e.g. STDs
- Increase in crime / insecurity
- encouraged poaching and illegal collection of marine resources
- led to international terrorism *1 x 5 = 5mks*   c) <u>Explain four physical factors that favours tourism in Switzerland</u> - climate which offers different season thus providing variety of activities
- varied scenery which offers marginalised scenery
- geographical location in Europe thus attracting many tourists from continental Europe
- political neutrality - made her convenient place for visitors
- linguistic plurality - able to speak all international languages
- well-developed transport network making areas accessible
- adequate accommodation facilities   *2 x 4 = 8mks* d) <u>Explain three economic importance of tourism in Kenya</u>
- simulate economic activity
- Employment
- earn foreign exchange
- earn the country revenue

- Social and cultural interactions between visitors and local people bring better understanding internationally -   has encouraged conservation and preservation of wildlife through the establishment of national banks -   has led to the development of remote areas
- has put proper usage of marginal lands
- has led to preservation and promotion of cultural exchange and understanding
- has promoted handcraft industry
- has promoted agricultural sector   *2 x 3 = 6mks* **KAJIADO COUNTY FORM 4 JOINT EVALUATION**
kenya certificate of secondary education (k.c.s.e)
GEOGRAPHY
Paper 1
July/August 2015
Time: 2¾ hours

SECTION A- 25 MARKS
Answer **ALL** the questions in this section

1. a) State **two** reasons why the interior of the earth is very hot.   (2 marks)   b) Name the **two** dominant minerals in the continental crust.   (2 marks)
2. Explain how a moraine -dammed lake is formed.   (4 marks)
3. The diagram below shows features formed through wave deposition. Name the coastal features marked **A, B, C** and **D**.
                                                                                                (4 marks)
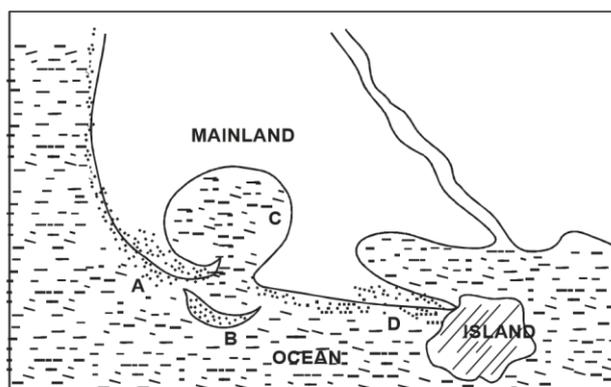
   b) State **two** causes of vertical movement of ocean water.
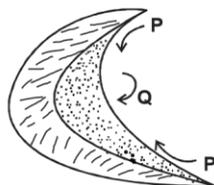
       (2 marks)
4. a) The diagram below shows a barchain.

i) Name the feature marked **P**.   (1 mark) ii) Name the air current marked **Q**.   (1 mark)   iii) Identify the wind process that forms a barchan. (1 mark)

   b) State **three** factors that contribute to the development of deserts.   (3 marks)

5.   a) What is climate   (2 marks) b) Describe three characteristics of the Mediterranean type of vegetation. (3 marks)

   SECTION B

   Answer **question 6** and any other **two** questions in this section

6. Study the map of Migwani 1:50,000 (sheet 151/1) provided and answer the following questions.

a) i) What is the six figure grid reference of Mui Dispensary in the east part of the area covered by the map.   (2 marks)

   ii) What was the magnetic declination of the area covered by the map as at January 1970.   (1 mark)

b) i) Measure the length of the Dry weather Road (D502) from the junction in grid square 9278 to its junction with Road and Track near Kamutungu school in Grid Square 9879. Give your answer in kilometres.   (2 marks)   ii)

What is the direction of the drift in Grid square 1271 from Holoni Dm in Grid square 9478.   (1 mark)   iii)

What is the altitude of the highest contour in the area covered by the map.   (1 mark)

c) i) Using a scale of 1cm to represent 40m, draw a cross section along 80 between Eastings 03 and 12.   (4 marks)

   ii) On the cross section, mark and name the following:

   - Hill   (1 mark)

   - Plain   (1 mark)   - River Ngoo   (1 mark) iii) Calculate the vertical exaggeration (V.E) of the cross section. (1 mark)

d) i) Citing evidence from the map, explain **three** effects of relief on the construction of transport lines.   (4 marks)

   ii) Citing evidence from the area covered by the mp, give **two** economic functions of Gwani town in Grid square 9079.   (2 marks)

e) Describe the long profile of River Ikoo. (4 marks)

7.   a) i) Apart from humus, name **three** other components of soil.   (3 marks)   ii) Differentiate between soil profile and soil catena.   (2 marks)   iii) Name the **four** processes of soil formation. (4 marks)

b) i) What is soil degeneration?   (2 marks) ii) Explain how the following factors causes soil degeneration:

- Overgrazing   (3 marks)

- Heavy rainfall   (4 marks) c) i) State **three** characteristics of azonal soils.   (3 marks) ii) Explain how each of the following factors influence soil formation:

• Parent rock   (2 marks)

• Living organisms   (2 marks)

8.   a) i) What is a watershed?   (2 marks) ii) Differentiate between river capture and river rejuvenation.   (2 marks)

iii) Apart from bird foot delta name other **two** types of marine delta.   (2 marks) b)

i) Explain the **four** processes of erosion by a river.   (8 marks)

ii) State **five** ways through which a waterfall is formed.   (5 marks) c)

You are planning to carry out a field study on the upper course of a river.

i) Give **two** activities you are likely to engage in the preparation for the field study. (4 marks) ii) State **two** characteristics of a river at the youthful stage you are likely observe during the field study. (3 marks) iii) Give **two** methods of collecting data you are likely to use during the field study. (4 marks) **9.** a) i) Apart from the Atlas mountain, name **two** other fold mountains in Africa. (2 marks) ii) What is orogenesis?   (2 marks) iii) Name the **four** orogenies known in geological history.   (4 marks)

b) With the aid of labelled diagrams describe the formation of an overthrust fold.   (8 marks)

c) i) Differentiate between symmetrical and asymmetrical folds.   (3 marks) ii) Explain **three** ways in which fold mountains influence human activities.   (6 marks) **10.** a) i) State **three** physical conditions that are necessary for siting a weather station.   (3 marks) ii) Give **four** reasons why weather forecasting is important. (4 marks)

   The table below shows rainfall and temperature figures of a station in Africa use it to answer questions b, c and d.

Month	J	F	M	A	M	J	J	A	S	O	N	D
Temp °C	24	24	23	22	19	17	17	18	19	20	22	23
Rainfall in mm	109	122	130	76	52	34	28	38	70	108	121	120

i) On the graph paper provided, draw a simple line graph to represent the temperature figures. (*Use vertical scale of 1cm to represent 2.5°C)*   (5 marks) ii) Calculate:

a) The mean annual rainfall in the station.   (2 marks)

b) The annual range of temperature for the station.   (2 marks)

c) Describe the climatic characteristics experienced in the above weather station.   (3 marks)

d) Your Geography class intends to conduct a field study in a weather station.

i) State **two** methods you are likely to use to collect data.   (2 marks) ii) State **three** advantages of studying weather through fieldwork.   (2 marks) iii) Identify **two** methods you may use to present your findings.   (2 marks) **KAJIADO COUNTY**

FORM 4 JOINT EVALUATION

kenya certificate of secondary education (k.c.s.e)

GEOGRAPHY

Paper 2

July/August 2015

Time: 2¾ hours

___

SECTION A- 25 MARKS

Answer **ALL** the questions in this section

1.   a) Explain **three** reasons why horticulture farming is more developed in the Netherlands than in Kenya. (3 marks) b) Give **two** reasons why the growing of flowers in greenhouses is preferred in Kenya.   (2 marks)

2.   a) What is ecotourism?   (2 marks) b) State **three** measures the government of Kenya has taken to attract more tourists.   (3 marks)

3. The sketch map below shows the Great Lakes and St Lawrence Seaway. Use it to answer question (a)
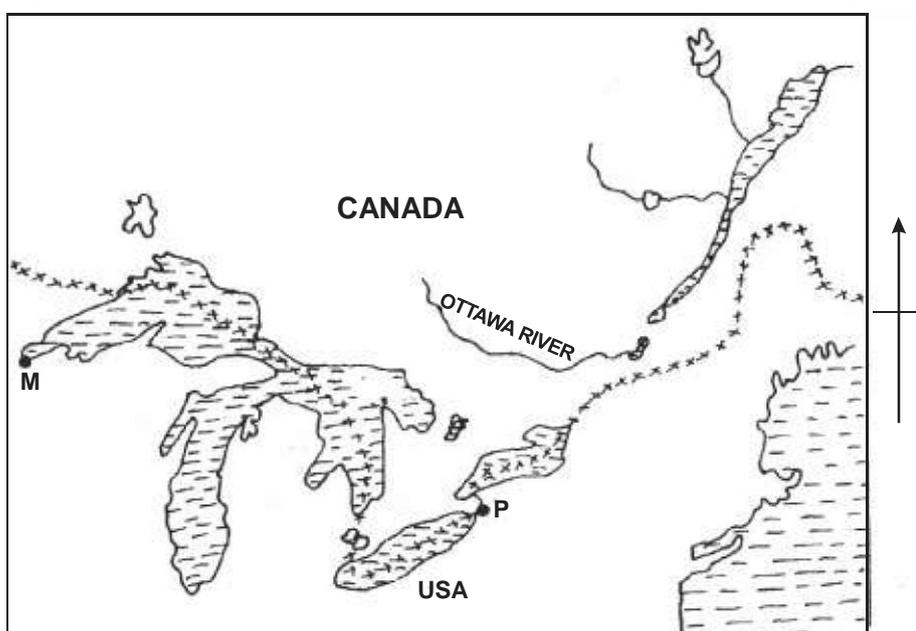
a)   i) Name the ports marked **M** and **P**.   (2 marks)

  ii) The lake marked **N**   (1 mark)

b)   Explain **two** benefiters of the Great lakes and St. Lawrence Seaway to the economies of USA and Canada.   (2 marks)

4.   a)   State **three** factors that have led to the growth of Thika as an industrial town.   (3 marks)

  b) State **two** problems encountered in New York city   (2 marks) **5.**   a) Apart from floods, give **two** other environmental hazards.   (2 marks)

  b) State **three** measures undertaken in Kenya to control floods.   (3 marks)

Section B

Answer ques**tion 6** and any other **two** questions from this section

6. The table below shows the tonnage of trade items in Kenya from various parts of the world in 2005 and 2006. Use it to answer question (a) and (b).

Place of origin	Tonnage per year

Europe	942,000	985,000
Africa	120,000	154,000
Asia	97,000	128,000
North America	94,000	103,000
Australia and Newzealand	19,000	24,000
All other countries	29,000	41,000
TOTAL	1,301,000	1,435,000

a) i) Which continent had the highest increase in tonnage of trade items in Kenya between 2005 and 2006?   (2 marks)
ii) Calculate the percentage increase trade tonnage from Australia and Newzealand between 2005 and 2006.   (2 marks)
iii) Draw a divided rectangle 15cm long to represent the tonnage of trade items in Kenya in 2006.   (10 marks) b) i)
State **two** advantages of using divided rectangles to represent geographical data.   (2 marks)
     ii) tate **four** reasons why in 2005 and 2006 there were higher tonnage for trade items from Europe compared to that from
          Africa continent.   (4 marks) c) State **five** ways through which the Kenyan government is promoting export trade.
(5 marks)

7.   a) What is a by-product in mining?   (2
marks)   ii) State **two** methods used in mining diamonds in South Africa.   (2
marks)   iii) Name **four** oil producing countries in the Middle East.   (4 marks)
b) Explain **four** ways in which South Africa has benefited from the mining of gold.   (8 marks)
          c) i) State **three** effects of open-cast mining on the environment.   (3 marks)
          ii) Explain **three** problems facing the mining industry in Kenya.   (6 marks) **8.**
a) i) Differentiate between renewable and non-renewable sources of energy.   (2 marks)
ii) Apart from wind, name **three** other sources of renewable energy.   (3 marks)
iii) State **four** factors that may lead to energy crisis.   (4 marks)
b) The map of African below shows hydroelectric power projects. Use it to answer questions that follow.
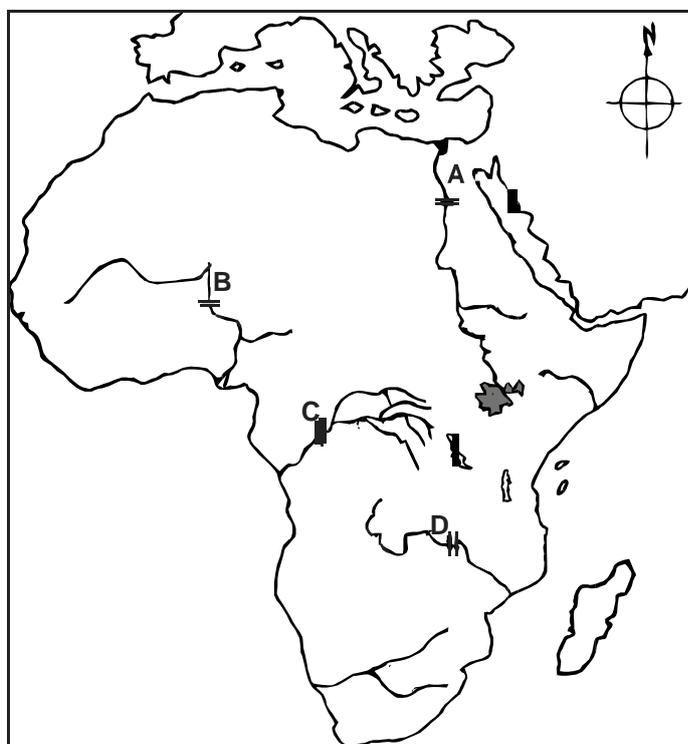
i)   Name the hydroelectric power projects marked **A, B, C** and **D**.   (4 marks)

ii)   Apart from the presence of a waterfalls. State **four** factors that influenced the location of Owen Falls power project in Uganda.   (4 marks)

c) i) Explain **four** ways in which Kenya has benefitted from the development of hydro-electric power schemes.(8 marks)

9.   a) i) What is population structure?   (2 marks)

ii) Differentiate between population density and population distribution.   (2 marks)

iii) State **three** measures that have been taken by the Kenyan government to reduce infant mortality.   (3 marks)

b) Explain how the following influence population growth.

 i) Fertility   (3 marks) ii) Migration   (3 marks) iii) Mortality   (3 marks) c) i) State **three** reasons why .population growth rates have declined in East African.   (3 marks)   ii) Explain **three** problems resulting from decline in population in developed countries such as Sweden. (6 marks) **10.** a) State **three** physical conditions that favour large scale sugarcane farming in Kenya.   (3 marks)   b) Describe the commercial cultivation of sugarcane from land preparation to the harvesting stage. (6 marks)

          c) Explain **five** problems facing sugarcane farmers in Kenya.   (10 marks)

d) Your class conducted a field study in sugar factory

i) Outline **four** stages of sugar processing that the class may have observed.   (4 marks)

ii) Name **two** by-products obtained from processing of sugar which class will have identified during the study. (2 marks)

KAJIADO COUNTY FORM 4 JOINT EVALUATION
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GEOGRAPHY
Paper 1
July/August 2015
Time: 2¾ hours
MARKING SCHEME

1. a) - It has retained most of its original heat.
   - Radioactivity processes.
   - Pressure from overlying mass of crustal rocks.   *2 × 1*

   b) - Silica
   - Aluminium(2x1)

2. Glacial erosion widens a valley.

   Glacier begins to melt on reaching its terminus

   Moraine is deposited across the widened valley to form a ridge of terminal moraine.

   The melt water accumulates behind the ridge to form a moraine- dammedlakes.(4x1=4mks)

3. (a) A   Spit   *1 mark*
      B   Bar *1 mark*
      C   Lagoon *1 mark*
      D   Tombolo *1 mark*

   b) Convergence of ocean currents.

   Differences in density of the water.2x1)

4. (a) i) P   -   Horn   *1 mark*
      ii) Q   die currents *1 mark*
      iii) Wind deposition *1 mark*

   b) Increase in temperatures accompanied by excessive evaporation.

   Cold ocean currents which are onshore

   High mountains which blocks rain bearing winds and cause a rain- shadow effect.

   Human activities such as deforestation, overgrazing etc.   *3 × 1*

5 a) the average weather conditions of a place for a long period of time i.e. 30 - 35 years *2 marks*

   b) - Some trees are ever green.
   - Grass dry up in summer and germinate during winter.
   - Characterised by the presence of shrubs, thickets, bush and thorn bushes.
   - Some plants have small, spiny leaves while others have thick - skinned a leathery leaves.   -   Some plants have long roots.
   - Some plants have thick barks.
   - Some plants have fleshy leaves while others have shinny, waxy leaves. etc3x1)

SECTION B

b) (i)122763   (1x2 mks)
   ii)2^023^1 (1x1mk)

b) (i) 8.8 km   (2x1=2mks)
   ii) South East   (1x1=1mk)
   iii) 1530 metres   (1x1=1mk)

                    (G59264)

c) i   & ii on graph paper.

   iii) VE= Vertical scale
Horizontal scale

   =1:4000   = 1   x 50,000
   1:50,000   4000   1
                    =25

d) all weather road bound surface in the North and west have avoided the rugged/Hilly terrain as evidenced by zigzag contours due to difficult expenses of construction .

-       Dry weather road D507 and D509 has avoided the flood plain along River Ikoo due to fear of floods and destruction

        deterioration between Easting 07 and 13 andfollowed the gently sloping area.   (2x2=4mks)
ii) Economic functions of Gwani town
-       Trade centre evidenced by ships, petrol stations
-       Transport centre evidenced by All Weather Roads Bound Surface.
-       Communication centre evidenced post office.   (2x1=2mks)
        e)   Description of long profile of River Ikoo
-       River Ikoo has its source on the watershed in Grid square 9276.
-       It flows along a steep gradient in direction. it then turns south East descending a gentle slope. It is joined by many tributaries from its source up to grid square 0770.
-       From grid square 0770 to Grid square 6513 it flows on a plain level land forming a flood plain.
-       River Ikoo also meanders from Grid square of 07 to Grid square 6513.   (4×1=4mks)
Q7. (a)
i)   -   Inorganic materials
        -       Water
        -       Air
        -       Microorganism   3×1 =3mks
ii)   Soil profile is the vertical arrangement of different layers of soil from surface to the bedrock, soil catena is the sequence of different soils down a slope on the surface of the land.   2x1=2mks iii) -
        Weathering   -   mineralisation
        -       humification
        -       leaching   4 × 1=4mks
B. (i) Soil degeneration is the decline in the usefulness of a soil due to soil mismanagement, environmental causes   or even both.   2x1=2mks
ii) Overgrazing leads to exposure of the soil to evaporation losing excessive water and also lowering biological organisms in the soil, soil is fine grained and loose and even drier hence prone to wind erosion   3x1=3mks -   Heavy rainfall can result into excessive erosion.
        This lowers the quality of the soil due to loss of top soil which is fertile.
        It can also lead to water logging of soil especially where the gradient is very gentle.
        which may reduce biological activities due to poor drainage.   4x1=4mks
c) (i) -They are young and of recent origin   - They are immature
        -       They are poorly affected by soil forming   processes
        3 × 1=3mks ii)- Hard rocks weather down at slower rate and soft rocks weather at high rates affecting rate of soil formation.
        -       Difference in mineral composition of rocks determine the resultant soils.
        2 × 1 - Living organisms mechanically engages in breaking down rocks through burrowing, ploughing or root penetration.
        Addition of organic acids by leaves dead stems influence chemical composition of soil.
        Also improves aeration of soil through burrowing or even ploughing   2x1 =2mks
8.a i)   A watershed is a ridge line or boundary line separating two drainage basins or river systems.   *2 × 1*
ii) A river capture is the diversion of the headwaters of one river into the system of an adjacent more powerful river due to the erosion while river rejuvenation is the renewal of energy by a river to erode deeper into its channel due to change in gradient or base level.   *2 × 1* iii) - Arcuate delta
        -       Estiarine delta   1x2 =(2mks)
b.i)- Through hydraulic action where the river water hits against rocks repeatedly eventually weaking them and breaks or water entering into cracks on the river banks creating pressure which is released shattering the rock
-       Through abrasion/ corrasion the load ferried by the river is hurled against the banks and the bed scouring into the rock eroding them

- solution/corrosion where river flows through areas of soluble rocks that dissolve into river water and ferried downstream in solution farm.
- Through attrition where the rocks, sand an other materials within water collides against each other breaking down further.

ii)- when a river descends from a cliff
- When a river descends a coastal plains from a scarp, -   When a river comes along a dyke.
- When faulting occurs across a river.   *5 × 1* c) (i)-   Conduct a reconnaissance
- Holding discussions
- Preparing questionnaires
- Reading through relevant books
- Selecting important tools
- Preparing a working schedule.   4x1 (4mks)

(ii) The river engages mainly in vertical erosion
         The valley is V-shaped
         The velocity of the river is high
         There are inter-locking spurs and gorges   2x1 (2mks)

(iii) Observation
         Measuring
photographing
         Sampling   2x1 (2mks)

9(i) Akwapim hills
         Cape Ranges1x2 (2mks)

ii) It is the process through which fold ountains are built or formed.   1x2=2mks

(iii) -   Charnian
- Caledonian
- Hercynian
- Alpine
                                                                                  1x4=4mks

     Rock layers   **Rock layers**   thrusplane   **Rock layers**

     An overfold   **A recumbent fold**   verthrust The o
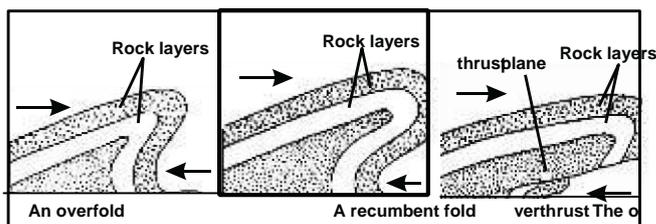
         Rocks are subjected intensive compression forces.
         Intense forces leads to formation of an overfold
         Continued compression due to increased pressure folds the overfold further to form a recumbent fold.
The pressure increases even further leads to fracture occurs in the recumbent fold and thrust plane develops
Displacement occurs along the thrust plane horizontally forming over thrust fold.
         Diagram -   4mks
         Description   4mks*TOTAL = 8 MARKS*

c) (a)(i) Symmetrical fold has limbs that dip uniformly from the axis whereas in asymmetrical fold one limb dips more deeply than the other.
                                                                            3x1 (3mks)

ii)- The windward side of fold mountain receive high rainfall which enables agricultural activities to take place.
- Fold mountains are river catchment regions, the rivers are harnessed for hydro-electric power, irrigation and for industrial purpose.
- Fold mountains act as tourist attraction sites.
         Some fold mountains contain valuable minerals that are extracted for economic use.
         Fold mountains acts as barriers to transport and communication lines making construction difficult and expensive.
                                                                            3x2=6mks

10 (a)(i) The area should be far away from tall objects such as buildings and Trees.
- The ground should be trees from flooding.
- It should be in an open space/wide view.
- Must provide a wide view of the surrounding landscape and the sky.
- The ground should be gently sloping.   *3 × 1* ii) Reasons whey
         weather forecasting is important; -   Enables farmers to plan their farming activities.
- It influences the designing of houses.
- it guides the timing of sporting activities.
- Helps in averting natural disasters related to weather.
- It guides in landing and taking off of aircrafts.
- Helps in planning military activities.
- It guides fishing activities.   Any 4 x1) b)(i)
ii) (a) The mean annual rainfall

$$\frac{109+122+130+76+52+34+28+38+70+107+121+120}{12}$$

=1008   =84mm
12   2 × 1 2mks b) Annual temperature range
            24 - 17 = 7°C   **2 × 1 = 2marks**
2mks c) -   Climate is generally cool and wet.
-      the station receive high annual rainfall   1008mm.   -   The lowest rainfall is 28 mm received in July   -
                  the highest rainfall is 122 received in Feb.
-      The temperature annual range is 7⁰C
-      The area receives rainfall throughout the year.   3x1= 3 marks) d) (i) methods of collecting dates
                  -Observation of weather instrument
            -Interviewing the meteorologists
                  -Administering questionnaires
                  -Taking measurements   (2x1=2
marks) ii)   Advantages of studying weather through field ware;
-      Enables students to collect first hand information
-      Enables students to develop manipulative skills. (know how).
-      Enables students to learn how weather is recorded using weather instruments.
-      Enables students to apply knowledge learned in class room.
-      Makes learning interesting /real
-      Enables one to collect accurate data.   **3 × 1 = 3 marks** ii)
                  Methods of presenting data.
-      Displaying photographs.
-      Displaying graphs and tables.
-      Displaying reports   **2 × 1**

KAJIADO COUNTY FORM 4 JOINT EVALUATION
kenya certificate of secondary education (k.c.s.e)
GEOGRAPHY
Paper 2
July/August 2015
Time: 2¾ hours

1. a)- There is a high demand for horticulturalcrops in the Netherlands than in Kenya.
      - Netherlands uses advanced technology than Kenya.
      - Netherlands has well developed and efficient transport network
      - Netherlands has highly skilled labour for production and handling of horticultural products .
      - Advanced research takes place in Netherlands while in Kenya is less advanced.
      - Netherlands is centrally located in Europe which gives it an advantage of the European market.(Any 3x1) b) -   The plants free from the effects of excessive rainfall, haustenes and strongwinds.
      - The spread of pests and diseases is easily controlled.   -   Amount of moisture required by flowers is easily controlled   -   To maintain uniform and constant climatic conditions.
      - It is easy to control weeds.   (Any 2x1).
2. a) Ecotourism is an environmentally friendly tourism whereby a tourist enjoys watching what
            nature has provided while at the same time protecting nat**2 × 1**   b) -
Improving roads and feeder roads to the attraction sites.   -Building of more hotels to
increase accommodation capacity.   -Promoting traditional culture   -
Providing package tours.
      -Advertising tourist attraction abroad.
            -Improving links (air links) to facilitate direct movement of tourists to Kenya.(Any 3x1)
3   a)   (i)   M   -   Duluth *1 mark*
                  P   -   Buffalo *1 mark*
            (ii)   Lake marked N-L.Huron *1 mk*
b) -   Has provided cheap means of transport for exports and imports.
-      The dams along the route provide H.E.P for both domestic and industrial use.
-      Has led to the growth of ports and towers along the route.
-      The seaway is a tourist attraction which generates income.
-      The seaway has created employmentopportunities in the transport industry thus raising the   living standards of the area people.
-      The lakes and dams are sources of water for both domestic and industrial use.

- The Governments earn revenue from toll charges levied on ships that use the route.   Any 2x1) 4.a) Factors that have led to growth of Thika town.
- it is surrounded by agriculturally productive district such as Kiambu, Maragua, Muranga etc which provide raw materials for industries.
- Access to abundant water supply from Rivers Chania and Thika used in the industries and for domestic use.
- Good road and railway lines which have made it easy to receive raw materials and transport industrial products to the markets.
- The High production of Thika has provided ready market for industrial products.
- Many investors have preferred to establish industries in Thika which is near Nairobi due to congestion in Nairobi. - There is expansive flat land for setting up industries and for expanding the etc(Any 3x1) b) Problems facing New York city.
- Traffic congestion
- Terrorism
- Increase pollution
- Increase crime due to unemployment   *2 × 1 = 2 marks*

5 a) Environmental hazards
- Lightning
- Draught
- Pests and diseases
- Earth quakes
- Fires
- Windstorms
- Pollution
- Volcanic eruptions etc   *2 × 1* b) Measures to control flood in Kenya.
- Construction of diversion channels / canals.
- Construction of artificial leeves.
- Construction of dams along the river channels.   (Any 3x1)

SECTION B

6a) i)   Which continent had the highest increase in tonnage of trade items in Kenya between 2005 and 2006.
    Europe   (2x1=2mks
    ii) Calculate the percentage increase of the number of trade tonnage from Australia and New Zealand between 2005 and2006.

2005   =19,000
2006   =24,000   =5,000x100
        Difference   5,000   19,000
                                        =26.32%
                            or 26.3% or 26% or 26 $^{6}/_{19}$

(2mks)   iii) Draw a divided rectangle 15cm long to represent the tonnage of trade items in Kenya in 2006.
        Europe -   985,000 X 15   =10.29cm/10.3cm
                        1435,000
        Africa   -   154,000 x 15   =1.60cm/1.6cm
                        1435,000
        Asia   -   128   x 15 =1.33/1.3cm
                        1435,000
        North America - 103,000 x 15 =1.076/1.1cm
                        1435,000
        Australia and New Zealand
        24,000 x15 ==0.25/0.3cm
        1435,000
        All other countries - 41,000 x15=0.42/0.4cm
                        1435,000

b) (i) State **two** advantages of using divided rectangles to represent geographical data.
- They give clear visual impression
- They allow comparison
- They can be used to represent a wide rage of data
- Easy to draw

- Easy to interpret (Any 2x1= 2mks)

ii) State **four** reasons why in 2005 and 2006 there was higher tonnage for trade items form Europe compared to that from Africa continent.
- Inefficient transport facilities between Kenya and other different railway gauges etc.
- Ignorance of what is produced in member countries in Africa.
- low level of technology in Africa limits production of processed goods.
- Different political ideologies among member counties in Africa restrict trade.
- Political problems such as civil wars in some African trade limit trade.
- Trade in Kenya still follow colonial pattern ie Kenya was colonized by Britain (Europe) hence established trade/political pattern. 4x1=4mks)

c) State **five** measures through which the Kenyan Government is promoting export
trade. - Signing international trade agreements with other countries e.g COMESA, GTT
etc.
- Establishing the export processing zone (EPZ) to produce more goods for export.
- Reduce import duty on raw materials.
- Introduced export compensation scheme locally.
- Encouraging foreign investors to establish industries to increase export goods.
- Licensing export to those willing to engage in export trade.
- Participating in trade fairs and international exhibitions to display export items.
- Encouraging industries and farmers to produce quality goods for export market.
- -Improved transport and communication for easy flow of commodities. (Any 5x1=5mks)

7(a) (i) Is an incidental secondary product obtained during the processing of some minerals. (2x1=2mks) (ii) Deep - shaft mining

Open - cast mining
Alluvial/placer mining $2 \times 1 = 2mks)$

(iii) Iran

Saudi Arabia
United Arab Emirates
Bahrain
Iraq
Kuwait
Qatar (1x4=4mks)

b) - Gold earns the country foreign exchange through export to other countries.
- Gold has been used as a unit exchange for paying international debts.
- Gold mining in South Africa is a major source of employment. - Gold mining regions has triggered the development of towns.
- Gold based revenue has led to development of other sectors such as infrastructure , residential and entertainments. $4 \times 2 = 8 marks$

c) i) - It destroys the natural vegetation which is cleared before mining.
- Water collects in hollows caused by the mining creating disease vectors habitats.
- It causes displacement of population and also hinders settlements.
- Heaping of mining rocks and open quarries leads to dereliction.
- Clearing of the land before mining encourages soil erosion. $3 \times 1 = 3 marks$ ii)- Insufficient capital for exploitation of minerals leading to expensive foreign loans borrowing.
Inadequate skilled labour personnel .
Dereliction of the land making the land ugly and dangerous for ruse by man and animals.
Pollution of the air by dust and smoke from blasting and quarrying. $3 \times 2 = 6 marks$

8(a)
(i) Renewable sources of energy are those sources that can be regenerated and be used for a long time which non-renewable sources of energy are those that once used become exhausted. $\times 1=2mks$) ii) - Sun -Water
-Wood
-Biomass
-Geothermal steam
-Drought animals $3 \times 1 = 3$
marks iii) Withholding oil by the oil-producing
countries.
- Increase in the price of oil triggered by a sharp rise in demand.

- Rapid depletion of oil reserves.
  Political disagreements
- Unequal distribution of petroleum products to countries by oil producingcountries. *4 × 1 = 4 marks* b) i)   A   - Aswan high dam *1 mark*
  - B   -Kainj *1 mark*
  - C   -Inga *1 mark*
  - H   -Cabora Bassa *1 mark*

ii) -   Constant volume of water throughout the year from lake Victoria which is a natural reservoir.
- Hard basement rock firm for the reservoir.
- Availability of space to a reservoir to form.
- Large local market as well as foreign market in Kenya.4x1(4mks) c)   -   Provision of electricity for domestic and industrial use.   -   Reservoirs are also used as fishing grounds.
- Local climate is modified by large reservoirs.
- Control of floods down stream.
- Foreign exchange is saved that would have been used to import power.
- It has triggered infrastructural development.   4x2 (8mks) *must explain*

Q9. (A).
i)   Population structure is the composition of population in terms of age and sex at a particular time.2x1 (2mks)
ii)   Population distribution is the way people are spread out on land and population density is the number of people per unit area of land.2x1(2mks)
iii) -   Encouraging parents to give their children balanced diet.
  -   Expanding family planning methods/programmes to cover more people.
  -   Improved research methods on infant related diseases to curb them.
  -   Modernisation of medical facilities so as to improve immunization of children.
  -   Education the masses on child care for healthy children.   3x1=3mks)

b. - High fertility rate leads to high population growth rate while lower fertility leads to low population growth rate. High fertility rates may result from low level of education traditional attachments and poor methods of family planning. *3 × 1*
- When people migrate from a country to a foreign country the population declines and the population of the recipient countries increases.   3x1 (3mks)
- High death rate has a negative effect on population growth as it reduces the number of people.
  A low death rate would affect the population growth positively in that the number of people increases as the birth rate is higher than death rate.3x1 (3mks)

c) i)   Natural calamites e.g. floods, droughts, civil wars.
  -      embracing family planning   *3 × 1*
ii) -   Inadequate manpower which makes labour expensive.
- High old age population dependency ratio.
- Underutilization of soil amenities such as schools, hospitals.
- Rural depopulation due to increased urbanization.*must explain -* 3x2 = 6mks) 10 a) State three physical conditions for largescale sugarcane.
- Warm temperatures through out the year/temperature of 21^0C to 27^0C   through out the year.
- High rainfall (1250mm-2000mm) whichis well distributed through out the year.
- Dry and sunny period before and during harvesting.
- Deep, clay or black cotton soil.
- Flat/gently sloping land for ease in   mechanization.
- Attitude between sea level and 1600mm (3x1=3mks)

b) Describe the cultivation of commercial sugarcane from land preparation to the harvesting stage.
- First, and is cleared.
- The land is then ploughed several times using tractors.
- Furrows are made/internal between 1.25 & 1.8m.
- Cuttings obtained from old sugar can/setts
- The sugar cane cuttings (called setts) are dipped in insecticides before planting.
- The setts are buried or planted in the furrows.
- Fertilizer is applied in the field severally.
- Weeding is done severally sometimes sprayed with herbicides.
- Can mature at about 18 months.
- The cane may be burnt before harvesting.
- Harvesting is done manually using pangas and the cane is filed in heaps for transportation.(6×1=6mks) c)   Explain five problems facing sugar cane farming in Kenya.

- Frequent fire outbreak-burning of caves by arsonists cause great losses to the farmers due to the destruction of cane.
- Flooding of the local market with cheap imported sugar reducer the market for the locally produced.
- High cost of farm inputs such as fertilizers, leaver farmers with less profits.
- Poor management of sugar cane factories which threatens some firms with closure due to inadequate funds e.g Ramisi - Pest and diseases e.g Raton stunting, wilt and stalk borer reduce the quality and quantity of sugar cane.
- Delayed payments to farmers lowers their morale hence lowering their production.
  Adverse weather especially drought make it difficult for cane to mature.
- Poor infrastructure reduce the rate at which sugar cane is delivered to the factories from farms.
- Low prices of sugar cane discourage farmers who then direct their efforts elsewhere.
- Delays in harvesting of sugar can reduces the quality and tonnage, thus causing a lot of wastage of cane and less earnings for farmers.(5x2=10mks)

10. d) Stages of sugar processing.
- Weighing of cane
- Washing of cane
- Cutting of cane into pieces
- Crushing cane pieces between rollers -   Boiling of juice with lime.
- Crystallization of massecuite (mollases and sucrose mixture).
- Growing of sugar crystals in tanes
- Separation of sugar crystals from molasses. -   Refining of sugar.   *4 × 1 = 4 marks*

ii) Sugar by-products
- Bagasse
- Molasses   *2 × 1 = 2 marks*

VIHIGA COUNTY JOINT EVALUATION - 2015
Kenya Certificate of Secondary Education
GEOGRAPHY
Paper -

July/August 2015
Time:

312/1

2 hours 45 minutes
SECTION A
<u>Answer **ALL** the questions in this section.</u>
1. a) What is lapse rate? (1 mark)
   b) Name two constituents of the troposphere.
      (2marks)
   c) Name the gas that is found in the stratosphere and state its significance. (2marks)
2. a) Define vegetation. (1mark)
   b) State four characteristics of coniferous forests. (4marks)
3. a) State two ways in which geographers study the interior of the earth. (2marks)
   b) Give three effects of revolution of the earth. (3marks) **4.**
   a) Name two types of soil according to soil order.
   (2marks) b) State three uses of organic matter.
   (3marks)
5. The figure below shows a feature of river erosion. Use it to answer the questions that follow.
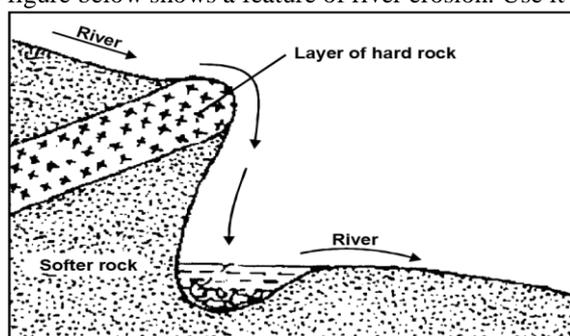
   a) State three ways in which the feature may form. (3marks)
   b) State two significance of the feature shown. (2marks)

   SECTION B
   Answer **question 6** and any other **TWO** questions from this section.
6. Study the map of Migwani 1 : 50,000 (sheet 151/1) provided and answer the following questions.
   a) i) Give the title of the map. (1mark) ii) Which type of map is this? (1mark)
      iii) List two types of scales shown on the map.
   (2marks) b) i) Name three natural features found in grid square 0570.
   (3marks) ii) Identify two methods that have been used to show relief on this map.
   (2 marks)c)
      i) Draw a rectangle measuring 12cm by 8cm to represent the area covered between Eastings 10 to 13
         and Northings 82
         to 84.
   (1mark)
      ii) On the rectangle drawn, show the following features;
         (3marks)
      - River Ngoo
      - Dry Weather road
      - Scrub
      iii) Calculate the new scale of the rectangle drawn.
         (2marks) d) i) Describe the drainage of the area shown by the map.
         (4marks) ii) Citing evidence from the map, give

three functions of Migwani. (6marks) **7.** a) i) Give two differences between weathering and mass wasting. (2marks) i) Name two processes of denudation apart from weathering and mass wasting. (2marks)

b) The diagram below shows a process of physical weathering. Study it and use it to answer the questions that follow.
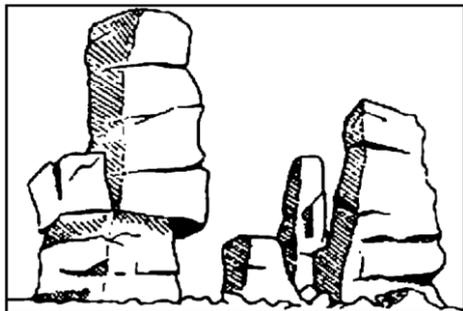
i) Identify the process shown in the diagram. (1mark)
ii) Describe how the process named in (b) (i) above takes place. (4marks)

c) Outline three differences between landslides and soil creep. (6marks)

d) State three effects of mass wasting to the physical environment. (3marks)

e) Suppose your class planned to carry out a field study on mass wasting around your school.

i) Formulate one hypothesis for such a study. (1mark)
ii) State three types of evidence you would look for to decide whether soil creep takes place or not around the school. (3marks) iii) State three problems you would anticipate to face during the study. (3marks) **8.** **a)** i) Differentiate between rocks and minerals. (2marks)

ii) State three characteristics of minerals. (3marks) iii) Give one example in each of the following categories of chemically formed sedimentary rocks; (3marks)

-Carbonates

-Sulphates

-Silicates

b) Describe how sedimentary rocks may be formed from physical processes. (5marks)

c) The diagram below shows a normal fault. Study it and use it to answer the questions that follow.
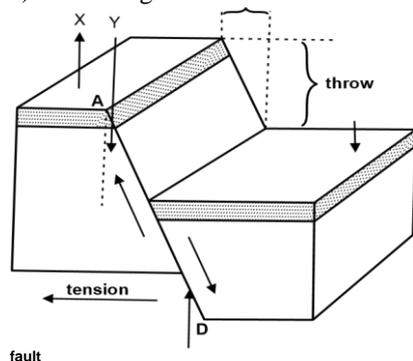
i) Name the parts marked X and Y. (2marks) ii) Give three other types of faults apart from the normal fault. (3marks) d) State three effects of faulting on drainage. (3marks)

e) Describe the formation of rift valley by tension force. (4marks)

9. a) i)Define the following terms; (2marks)

-Solar radiation

-Terrestrial radiation

VIHIGA COUNTY JOINT EVALUATION - 2015
Kenya Certificate of Secondary Education
GEOGRAPHY
Paper -

July/August 2015
Time:

ii)If air at 25^{0}C contains 15.2g/cm^3 of water vapour and that the same amount of air can hold a maximum of 25.7g/cm^3 of water vapour at the same temperature, calculate the relative humidity. (2marks)
b) i)Name two planetary winds found in the northern hemisphere. (2marks)
ii) With the aid of a clearly labeled diagram, describe the occurrence of katabatic winds. (5marks)
c) i) What is the Inter Tropical Convergence Zone? (2marks)
ii) State three characteristics of ITCZ that are associated with weather. (3marks)
d) Explain how the following factors influence the climate of a given area.
i) Latitude (2marks)
ii) Winds and ocean currents. (4marks)
e) State three natural causes of climate change. (3marks)
10. a) i) Name three types of tides. (3marks)
ii) Describe two processes by which waves erode. (4marks)
b) Using well labeled diagrams, explain how each of the following features is formed.
i) A spit (5marks)
ii) A blow hole (5marks)
c) Some students carried out a field study on coastal features found along the coast of Kenya.
i) List three features formed as a result of coastal emergence that they are likely to have studied. (3marks)
ii) State three methods the students may have used to record their data. (3marks)
iii) Describe two ways in which features resulting from coastal emergence are of significance to Kenya. (2marks)

312/2

2 hours 45 minutes
Answer ALL questions in this section
1. a) State three negative effects of global warming. (3 marks) b) List any two legislations in Kenya that are aimed at management and conservation of the environment. (2 marks)

2. a) Describe the characteristics of the population shown by the pyramid below.   (3 marks)

        Percentage of total population
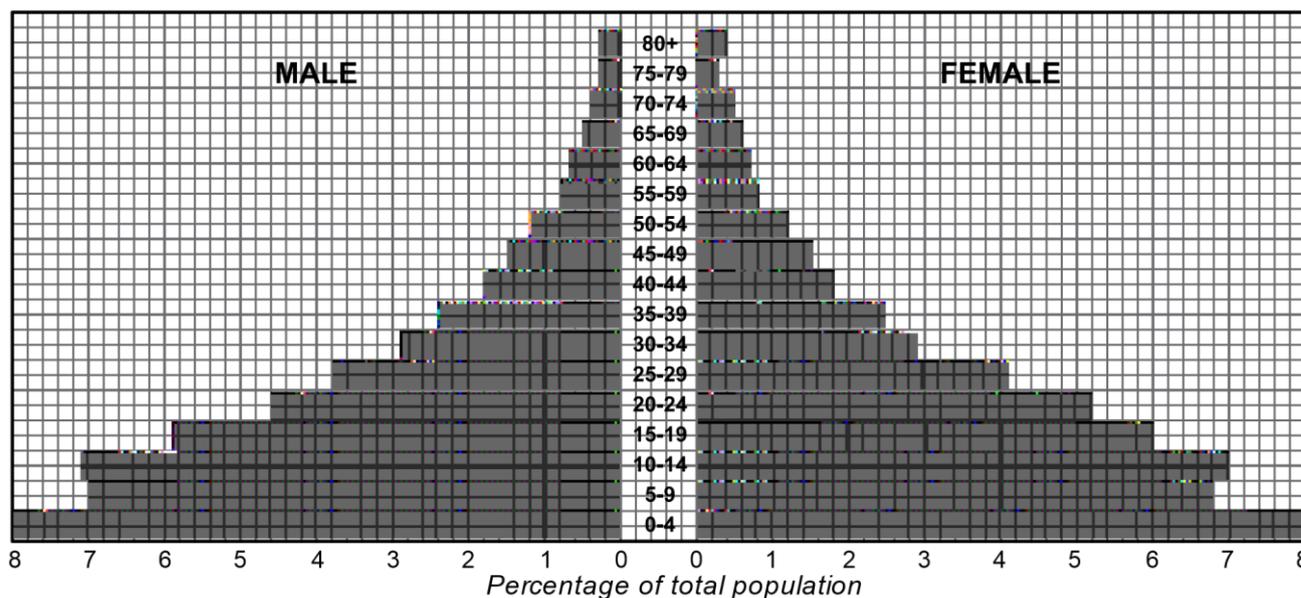
        b) Outline three pull factors responsible for rural-urban migration.   (3 marks) **3.**
a)   Give three factors that led to the development of cottage industries in India.   (3 marks)
b) Mention two ways in which the government of Kenya has promoted Jua Kali industries in the country.   (2 marks)
4. State four factors that make it difficult to exploit tropical hardwood forests.   (4 marks)
5. a) State two main objectives of SADC   (2 marks) b) Name any three institutions established by COMESA to promote
    trade.   (3 marks)

        SECTION B
        Answer question 6 and any other two questions from this section
6. The table below shows the number of tourists who visited National Parks and Game Reserves in Kenya between 2007 and
    2008. Use it to answer question a

	Number of tourists	
Game Reserve /National Park	2007	2008
Masaai Mara	30,000	25,000
Amboseli	20,000	18,000
Tsavo	40,000	30,000
Nairobi	10,000	8,000
Sibiloi	6,000	38,000
Hell's Gate	4,000	3,000

a)   i)   Draw a divided rectangle 15cm long to represent tourists who visited Kenya in 2007.   (10
marks)   ii) Which Game Reserve / National park had the highest decline in the number of tourists in 2008?   (2
marks)   iii) Calculate the total number of tourists who visited Kenya for the two years.   (2 marks) b)
Name three tourist attractions found in the Rift valley region of Kenya.   (6 marks)
c)   State three reasons why Switzerland receives more tourists than Kenya.   (3 marks)
d)   Give two measures that the Kenyan Government has taken to conserve wildlife other than establishing National Parks and
     Game Reserves.   (2 marks)

VIHIGA COUNTY JOINT EVALUATION - 2015
Kenya Certificate of Secondary Education
GEOGRAPHY
Paper -

July/August 2015
Time:

7.a) Use the map of Africa below to answer question (i) to (iii)
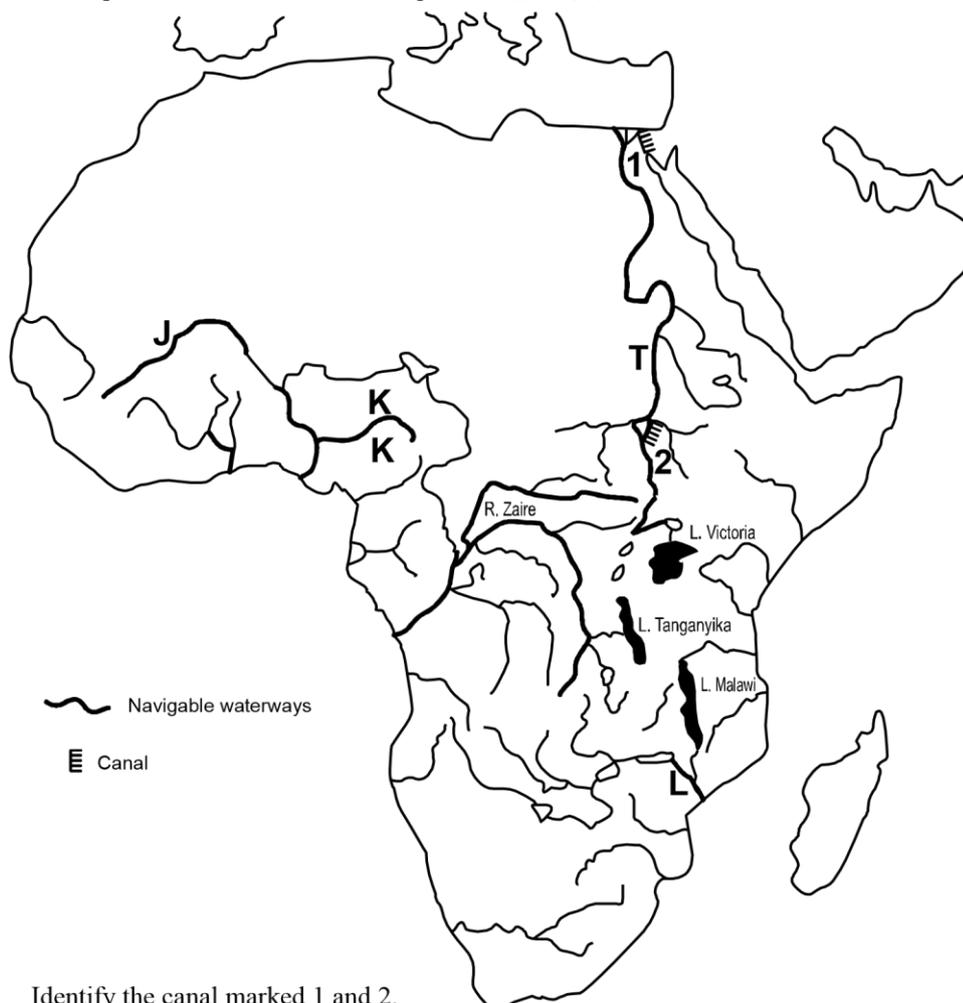
   i)   Identify the canal marked 1 and 2.   (2 marks)
   ii)   Name the rivers marked J, K and L.   (3 marks)
        iii) Explain three physical conditions that hinder transportation on the river marked T.   (6 marks) b)
In which three ways has the use of cell phones contributed to economic development in Kenya?   (6 marks)
c)   Suggest four measures that can be taken to improve railway transport in Kenya.   (4 marks)
d)   Explain two ways in which the Great Lakes of N. America and St. Lawrence Sea way has lead to industrial development in the region.   (4 marks)
8.a) State three physical conditions that favour large scale sugarcane farming in Kenya.   (3 marks) b)
Describe how sugarcane is processed to white sugar.   (6 marks)
c)   Explain four problems facing sugarcane processing factories in Kenya.   (8 marks)
d)   Draw a sketch map of Ghana.   (1 mark)
        On the sketch map mark and label.
 i) Accra   (1 mark) ii) Cocoa growing areas.   (1 mark)
        iii) Name two varieties of cocoa grown in Ghana   (2 marks) e)
Your class intends to carry out a field study on a sugar processing factory. State three objectives for the study. (3 marks)   iii)
What two benefits would be there if more commuters in urban centres in Kenya used public transport?   (2 marks)
9.a) i)   Name two non-renewable sources of energy used in Kenya apart from petroleum.   (2 marks)

Give three reasons why petroleum is the most exploited source of energy in the world. (3 marks)
ii
)
b) i) Name four proposed sites for H.E.P. generation on River Tana. (4 marks)

Explain four physical factors that favour H.E.P. production on River Tana. (8 marks)
ii
)
c) i)What is energy crisis? (2 marks)

State four causes of energy crisis in Kenya. (4 marks)
ii
)

10. a) i) Name two minerals that occur as placer deposits. (2 marks)
ii) Describe deep shaft method of mining. (6 marks) iii)
Give three problems associated with deep shaft method of mining. (3 marks) b) Explain
how the following factors influence exploitation of minerals.
 i) Value of the mineral (2 marks) ii) Quality of the ore. (2 marks) iii) Mining method. (2 marks) c) Explain
four effects of open cast mining on the environment. (8 marks) 312/1

2 hours 45 minutes
SECTION B
Answer All the questions
1. a) Lapse rate is the rate at which temperature decreases with increase in altitude in the troposphere / temperature decrease with increase in height at a uniform rate. *(1 x 1 = 1mk)* **b)** Water vapour
Clouds

Dust/aerosols Air/gases any 1st *2 x 1mk = 2mks)*
c) Ozone gas *(1 x 1mk = 1mk)*

Ozone absorbs the ultra-violet solar radiation which is harmful to life on the earth. *(1 x*
1mk = 1mk) **2a)** Vegetation refers to collective plant cover on the surface of the earth. *(1 x*
1mk = 1mk) **b)** Trees are cone-shaped. Trees are ever-green.

Trees have thick barks.

Trees grow in pure stands.

Tree species include cypress, fir, pine. *any 1st 4 x 1mk = 4mks)*
Accept any relevant
3a) Through studying earthquakes/seismic waves.

Through study of volcanic materials extruded onto the earth''s surface/exposed due to denudation.
Studying rocks from borehole drills/mines.

Studying materials from meteorites. *any 1st 2 x 1 mk = 2mks)*
b) it causes the four seasons i.e. summer, winter, spring and autumn.

it causes difference in length of day and night at different times of the year. it
causes apparent different in the position of the midday sun at different times of the year.

it causes lunar eclipse *any 1st 3 × 1 = 3 marks*
4a) Zonal order

Azonal order

Intrazonal order *(any 1st 2 x 1mk = 2mks)*
b) Organic matter is food for soil micro-organisms. Helps in binding soil particles together.

Improves the water-holding capacity of soil.

Its dark colour rises soil temperature for proper functioning of micro-organisms.

Provides soil with plant nutrients. *(any 1st 3 x 1 mk = 3mks)*
5a) A waterfall is formed where a river channel passes over underlying hard/resistant rock.

Due to river rejuvenation at knick points.

Where a river channel flows over underlying volcanic dykes/plugs/lava dams.

Where a river course flows over a fault scarp/escarpment.

Where a river enters a coastal plain from a plateau.

Where a river enters a sea through a cliff.

Waterfalls formed in glaciated uplands from hanging valleys. *(any 1st 3 x 1mk = 3mks*
b) At waterfalls, a river water may be harvested to generate hydro electric power (H.E.P Water
falls interfere with river transport/navigation.

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      Waterfalls interfere with movement of fish upstream.
      Water falls attract tourists earning foreign exchange.   *(any 1st 2 x 1mk = 2mks*

<div align="center">

SECTION B
Answer question 6 and any other two questions

</div>

6a) i) East Africa 1:50, 000 (Kenya)   *(1 x 1mk = 1mk)*
ii) Topographical map   *(1 x 1mk = 1mk)*
iii) Linear scale
           Representative fraction scale   *(2 x 1mk =*
2mks) **b)i)**   Scrub
           River
           Hill/escarpment   *(any 1st 2 x 1 = 2mks)* **ii)**
Trigonometric stations
       Contours
       Rock drawings
       Spot heights   *(any 1st 2 x 1 = 1mks)*

c)   **(i)and (ii)**
A rectangle to represent the area covered between eastings 10 to 13 and northing 82 to 84 on Migwani map.

13 iii) $\dfrac{1}{50,000}$ x $\dfrac{2}{1}$ = $\dfrac{1}{25,000}$ (or 1: 25,000)
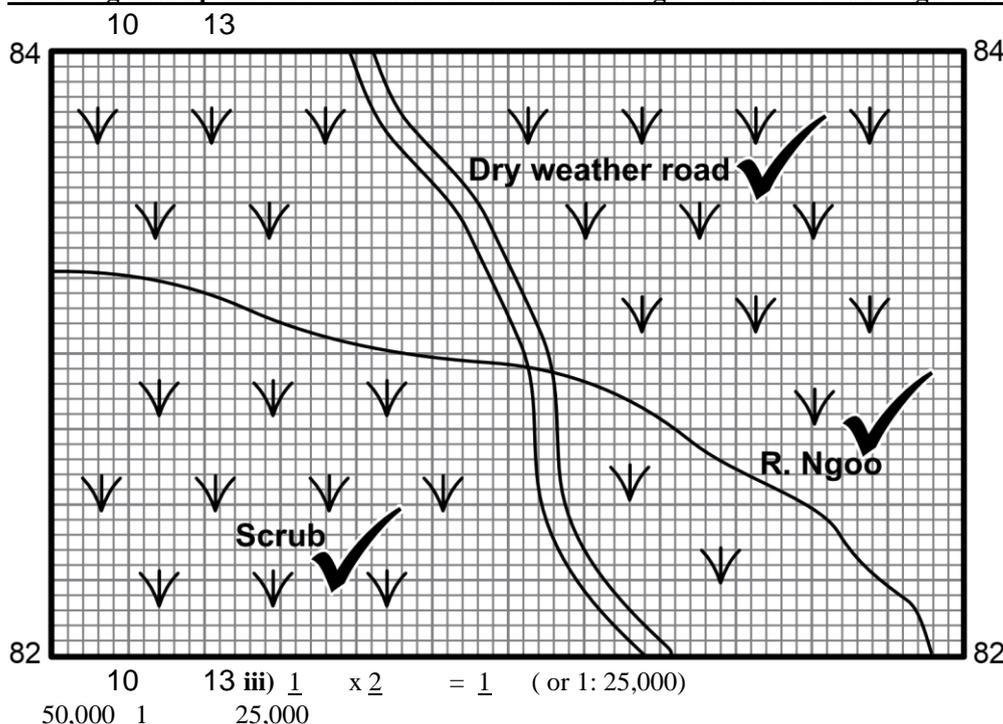
d)i)   The area has many permanent rivers such as R. Ngoo.
Most of the rivers are flowing from the north to the South-east.
       Some rivers have dams./ water reservoirs
       Most rivers show dendritic drainage pattern.   *(4 x 1mk = 4mks)*

ii)   **Function**   **Evidence**
    Education   -   Presence of schools

    Religious   -   Presence of Churches

Commercial -   Presence of shops/markets

Transport   -   Presence of All weather

road: loose surface

Communication- Presence of post office.   *(any 1st 3 x 2mks = 6mks)*
Correct evidence must be shown on the map.

7a) i)   Weathering occurs in Situ/ without   movement while mass wasting involves   movement
Weathering involves breakdown, disintegration and decay of rocks while   mass wasting involves movement of
weathered materials.   *(2 x 1mk =*
2mks)   **ii)** Erosion
Transportation   *(2 x 1mk*
= 2mks) **b) i)**   Block disintegration   *(1 x 1mk*
= 1mk) **ii)** Occurs in areas that experience large diurnal temperature ranges.   There is direct heating
during the cloudless   day followed by sudden - re-radiation at night.   This causes the rock to
expand during the day   and contract during the night.
Joints in the rocks tend to expand and the rock masses break into smaller blocks.   *(4 x 1mk = 4mks)*

c)   Landslides   **Soil creep**
Are rapid mass wasting processes   Are slow mass wasting process
Takes place in areas of steep slopes   Takes place in areas of gentle slopes
Movement can be seen/noticeable   Movement is interceptible /cannot be seen.   Movement
involves all types of weathered
materials.   Movement involves only soil particles.
Causes loss of life/destructing property   Little effect on human activities.

Accept any relevant point

Comparison must be complete to score

any 1st 3 × 2 = 6 marks

d)   Materials from landslides may dam river valley to form lakes.
Landslides leave scars / depressions on hill sides/form hillock down slope.

Destruction of vegetation increases soil erosion.

Rivers may be forced to change their courses.

Fertile soils may be deposited downslope for farming

Certain processes e.g soil creep/landslides may damage infrastructure. *(3 x 1 = 3mks)* **e)i)**

Most common mass wasting processes around the school are slow processes.

Least common processes around our school are landslides. *(1 x 1 = 1mk)*

Accept any other correctly formulated hypothesis. **ii)**

Mounds of soil behind walls. Tilting of poles/fences.

Bending of tree trunks

Bulging of walls. *(3 x 1 = 3mks)* **iii)**

Attack by wild animals would disrupt the study.

Rainfall would disrupt data collection

Accident especially on steep slopes may disrupt.

Difficulty in identifying evidence of some of mass wasting processes.

Fatigue from walking long hours. *(any 1st 2 x 1 = 2mks)*

*Accept any relevant respo*nse

8a) i) Rocks are aggregates of mineral particles   while minerals are inorganic substances that occur at or below the surface of the earth. *1 × 2 = 2 marks* **ii)** Minerals have different degrees of hardness.

Minerals have different colours.

Some minerals are made up of one element, some have more elements.

Some minerals are opaque, some are translucent while others are transparent.

Minerals aggregate into district shapes.

Minerals differ in streak.

Minerals have different tenacity.

Minerals differ in lustre.

Minerals differ in cleavage.   *(any 1st 3 x 1mk = 3mks)* **iii) Examples of:-**

Carbonates - Travertine, soda ash (trona) Sulphates -

Gypsum.

Silicates - flint

b)   These form from small particles of rock waste derived from existing rocks through weathering and erosion.

The weathered rock materials are transported and deposited by water, ice, and wind on land or in water.

The deposits accumulate overtime.

They become compacted, hardened by pressure to form sedimentary rocks.

The process repeats itself over time forming different layers. *(5 x 1mk = 5mks)*

c)   **i)**   X - upthrow *(1 x 1 = 1mk)*

Y - Hade *(1 x 1 =*

1mk)   **ii)** Reversed fault   Shear/tear fault

Anticlinal fault

Upthrust fault / thrust fault *(any 1st 3 x 1 = 3mks)*

d)   Vertical faulting across a river may cause a waterfall and river rejuvenation.

Rift faulting in an enclosed area may lead to formation of Lakes if rivers drain into it.

Some rivers may flow along a fault line or exhibit a fault-guided drainage pattern.

Uplifting of land due to faulting may cause rivers to change/reverse their direction of flow.

Rivers may disappear into the ground along fault lines.

Windward slopes of block mountains may be forested hence become river/water catchment areas.

(any 1st 3 x 1mk = 3mks)

e)   Tensional forces make crustal rocks to pull apart from each other.

Pulling away of rocks from each other leads to formation of normal faults.

Continued tensional forces lead to the middle block sinking/subsiding to form the floor of the rift valley.

Repeated process leads to formation of step-faults.

The rift valley is bound by steep slopes known as escarpments. *(4 x 1 = 4mks)*

9a) i)   Solar radiation refers to heat energy from the sun transmitted in form of short wave rays. *1 × 1 = 1 mark*

Terrestrial radiation is the heat energy emitted by earth in form of long wave rays *(1 x 1*

= 1mk) ii)   15.2   x 100% = 59.14%   or 59%

25.7   *(2 x 1 = 2mks)*

bi) North - East trade winds

Polar Easterlies

ii)
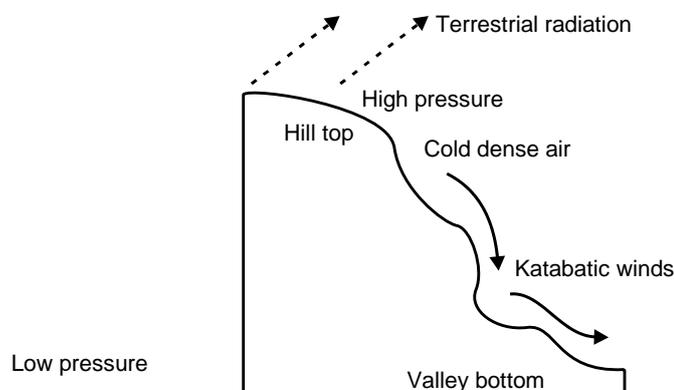
At night air at hilltops and mountain slopes are cooled faster than valley slopes by terrestrial radiation.

At the hilltop the air becomes denser and pressure increases while the air below the valley is warmer and of low pressure.

Then cold dense air in the upper slopes flows downhill by gravity as katabatic winds.   *(3 x 1 = 3mks)*

c)i)   ITCZ is a low pressure belt which shifts north to South of the equator according to the position of overhead sun.

(1 x 2 = 2mks)

ii) ITCZ is a zone of low pressure and doldrums

Experiences high temperatures.

Experiences convectional rain/rain with thunder and lighting/thunderstorms

Its where the N.E and S.E trade winds converge.   *(any 1st 3 x 1 = 3mks)* **d)**

i) Latitude

Temperature reduces from the equator polewards due to long distance to be covered by the sun"s rays to reach polar areas hence low intensity.

Places astride the equator experience high temp due to the effect of the overhead sun.   *(any 1st 1 x 2 = 2mks)* **ii)**

Winds and Oceans currents

Local winds e.g land breeze & sea breeze/anabatic/katabatic winds may increase/decrease the temperature of the areas they blow over.

Winds blowing from warm regions/over warm ocean currents carry a warming influence on the adjacent land.

Anabatic winds lead to formation of cumulus clouds that cause afternoon rainfall in highland areas.

(any 1st 2 x 2mks = 4mks)

e)   Variation in carbon IV oxide

Variations in solar output.

Variation in the earth's orbital characteristics.

Volcanic eruptions

Emission of chloroflorocarbons   *(any 1st 3 x 1mk = 3mks)*

10a) i)

Spring tides

Neap tides

Perigean tides

Apogean tides   *(any 1st 3 x 1 mk = 3mks)*

ii) Hydraulic action - the swash/breaking waves hit against the cliffs shattering the rocks./The force of breaking waves compress air into the cracks in the cliff face. This enlarges the cracks and parts of the rocks may break off.

Abrasion/corrasion rock fragments carried by waves are used as a tool to grind against the cliff face as the waves break. Rock fragments carried by the backwash erodes the sea floor.

Solution/corrosion - The solvent and chemical action of the sea water dissolves and removes the soluble materials that are found in the cliff/sea floor.

Attrition - Particles that are carried by waves are constantly colliding against each other. This wears them into smaller sizes.

Naming process - 4 max 2
Description - 4max 2
Total = 4mks

b)i) A spit:

A spit is formed on a shallow shore where there is a change in the angle of the coastline.

The movement of materials along the shore by long shore drift is halted.

The materials are deposited in the water as long shore drift waves continue moving forward.

Deposition of materials such as sand and shingle continues and they accumulate seawards.

With time, an elongated feature with one end attached to the mainland projects into the sea. This is called a spit.
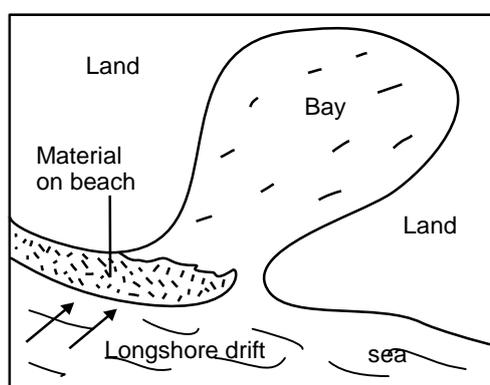
Diag 2 x 1 = 2mks   *Text 3 x 1 = 3mks*

ii) A blowhole

Formation of a blow hole.

- Wave erosion acts on a line of weakness at the back part of the roof of a sea cave.
- At the same time, weathering especially by solution acts on he line of weakness from the surface downwards.
- Eventually, a vertical shaft / hole, which connects the surface to the cave below is formed is called a blowhole.

  Alternative

- Wave action at the base of a cliff attack the zone of weakness.
- The cave develops and gradually enlarges following the lines of weakness.
- The cave eventually opens up further inland through a vertical shaft / line of weakness to form a blow hole. **c)i)** Raised beaches Raised cliffs / old cliffs

  Raised wave - cut platforms
  Raised notches
  Raised caves / Old caves
  Raised coral / exposedcoral rocks.
  Mud flat
  Abandoned caves
  Abandoned notches
  New caves
  New clifts   *any 1st 3 x 1 = 3mks)*

ii) Students took photographs of coral features.

Students took notes.
Students filled in questionnaires.
Students labelled samples of shells / rocks
Video recording / filming of coastal features.
Students drew sketches / map / diagrams of coastal features.

Tabulating

Tallying   *(any 1st 3 x 1mk =*
3mks) **iii)** Feature such as raised beaches attract tourists hence earn foreign exchange/revenue to country.

Coral limestone rocks can be extracted for building/construction.

Limestone rocks are used to manufacture cement

The coastal margin features provide a environment for education / research activities.   *any 1st 2 x 1 = 2mks*

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Time: 2 hours 45 minutes

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SECTION A

1a) State three negative effects of global warming. (3mks)
- Retreating of polar ice which can cause extinction of polar bears.
- Melting ice resulting in the rise in sea level causing submergence of coastal lands.
- More turbulent weather and hurricanes which causes a lot of destruction of property.
- Some parts of the earth will experience floods due to increased rainfall.
- Some parts of the earth will experience severe drought leading to water shortage and famine.
- Extinction of some species of plants due to too much heat.
- Death of some animals and reduced fish population.   *Any 1st 3 well stated x 1 = 3 mks* **b)**
     List any two legislations in Kenya that are aimed at management and conservation of the environment. (2mks) -
     The wildlife conservation and management Act.
- The Antiquities and monument Act.
- The Grass Fires Act.
- The plant protection Act.
- The Water Act.
- The Forest Act.
- The Public Health Act.
- The Factories Act.
- The Radiation Protection Act.
- The Local Authority By-laws. *Any 1st 2 × 1 -= 2 marks*

2a) Describe the characteristics of the population shown by the pyramid below.(3 mks) -
Has a large proportion of young people below 20 years.
- Has a small proportion of old people aged above 60 years.
- Has a high birth rate.
- The life expectancy is low.
- Dependency ratio is high.
- High infant/child mortality.
- The number of female and males at all ages are almost equal.
     Outline three pull factors responsible for rural-rural migration.
(3mks) -   Availability of jobs in plantation/estates.
- Availability of fertile land in one rural areas.
- Availability of water and pasture.
- Security in one rural area.
- Development of an irrigation/settlement scheme in a rural area.
- Availability of social amenities in a rural area.   *Any 3 x 1 = 3mks*

3a) Give three factors that led to development of cottage industries in India. (3mks) -
Availability of labour provided by the large Indian population.
- The urge of the people to earn income and uplift their living standards.
- Availability of simple and affordable tools/machines for use.
- Government support/financial assistance/protection.
- Ready market from the large population in India.
- Activities involved can be carried out anywhere.   *Any 1st 3 x 1 = 3mks*

b)   Mention two ways in which the government of Kenya has promoted Jua Kali industries in the country.
(2mks) -   Has provided space for the establishment of Jua Kali sheds.
- Has assisted in putting up permanent structures for Jua Kali artisans through K.I.E.
- Given loans to the artisans through K.I.E for purchasing materials and for building sheds.
- Has offered advisory services to the artisans on marketing and expansion.
- Has facilitated formation of cooperatives through which artisans access credit facilities and market their products.
- It has offered training through seminar and workshops to improve skills of the artisans.

-
- Has set up and equipped youth polytechnics to encourage acquisition of necessary skills.   *Any 1st 2 x 1 = 2mks* **4. State four factors that make it difficult to exploit tropical forests. (4 mks)** - Most trees have large trunks with buttress roots which make it difficult to cut.
- The trees are heavy hence difficult to transport.
- Lack of pure stands makes it difficult to locate and exploit a particular tree species.
- Thick undergrowth and muddy conditions make transportation of logs difficult.
- Inhospitable environment makes work difficult/heavy rains/hot and humid conditions.
- Inadequate capital to exploit them.
- Thick vegetation/climbers obstruct felling of trees.
  Some dangerous wild animals in the forest attack people.
- Limited uses for tropical hardwoods discourage their exploitation.   *Any 1st 4 stated x 1 = 4mks* **5a) State two main objectives of SADC (2mks)**
- To facilitate trade and economic liberalization among the member states.
- To promote regional integration.
- To eradicate poverty within the member states.
- To establish a common market on step-by-step basis.
- To reduce tariffs on goods imported from member states.   *Any 1st 2 stated x 1 = 2mks*

b)   Name any three institutions established by COMESA to promote trade. (3mks)
- COMESA Bank
- A reinsurance company.
- A clearing house.
- The court of justice   *Any 1st 3 x 1 = 3mks*

SECTION B
Answer question 6 and any other two questions from this section.

6.   ai) Draw a divided rectangle 15cm long to represent tourists who visited Kenya in 2007. (10mks)
A divided rectangle showing the number of tourists who visited national and game reserve in Kenya - 2007.
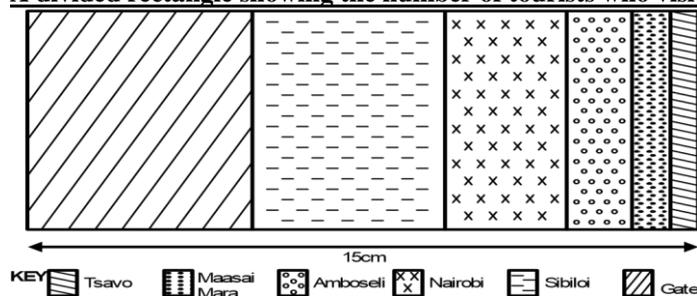
          Key   1mk   Working   3mks
Segment 6mks   Total   10mks
Must have the title to score maximum 10mks

ii)   Which name Reserve/National Park had the highest decline in the number of tourists in 2008? (2mks)
-       Tsavo with 10,000 tourists.   (2mks)
iii)   Calculate the total number of tourists who visited Kenya for the two years.
(2mks) -   2007 = 30,000 + 20,000 + 40,000 + 10,000 + 6,000 + 4,000
        = 110,000
        2008 = 25,000 + 18,000 + 30,000 + 8,000 + 3,800 + 3000
        = 87,800
        = 110,000 +
87,800   = 197,800
Tourists
b)   Name three tourist attractions found in the Rift Valley region of Kenya. (6 mks) -   Archaeological sites e.g Kariandusi and Olorgessaillie.
-       People"s culture.
-       Wildlife in National Park and Game Reserves i.e Lake Nakuru National Park.

-

- Variety of sceneries - Crater (Menengai), Geysers and Hot springs, lakes, Great rift valley, Escarpments, water falls. - Warm climate.
- Birds e.g flamingos
- Vegetation - forests and glasslands.
- Sports e.g safari rally
- Mining sites.   *Any 1st 3 x 1 = 3mks)*

c)   Explain three reasons why Switzerland receives more tourists than Kenya. (6mks)
- Switzerland is located in Central Europe making it easily accessible to tourists of European origin while Kenya is far from Europe.
- Some tourist attractions in the two countries are similar hence tourists prefer visiting those that are near home (in Switzerland)
- Peaceful atmosphere in Switzerland encourages tourists to visit it as opposed to Kenya where reports of insecurity scare away potential tourists.
- Switzerland mounts more effective marketing promotion than Kenya.
- The well developed transport networks in Switzerland provide easy access to tourist sites while in Kenya many roads are poorly maintained.
- In Switzerland tourists are charged fairly for the services while in Kenya the charges are relatively high.
  In Switzerland there is more encouragement of package tours which lowers the rates charged for tourist facilities while in Kenya package tours are few.
- Diversity of languages spoken in Switzerland makes it possible for tourists to communicate while in Kenya few international languages are spoken.
- Advanced training of personnel in Switzerland that provides higher quality services than Kenya which is less advanced.
                                                                               Any 3 well stated x 1 = 3mks

NB: The two countries MUST be mentioned in every point to score.

d) Give two measures that the Kenyan Government has taken to conserve wildlife other than establishing National Parks and Game reserves. (2mks)
- Has encouraged people/individuals to set up game ranches.
- Has banned trade in wildlife products/hunting of wildlife.
- Has established anti-poaching/employed game rangers to protect the animals.
- Has encouraged wildlife conservation education.
- Has protected endangered species in orphanages, sanctuaries and arboretum.
- Has promoted peaceful co-existence between wildlife and human beings.
- Has prohibited human activities in wildlife areas.
- Set up forest reserves.
- Has imposed heavy penalties for illegal possession of game trophies.
- Established KWS which is responsible for conservation of wildlife.
- Encouraged the practice of eco-tourism.
- Constructed electric fences around game parks and reserves.   *Any 1st 2 x 1 = 2mks*

7a) Use the map of Africa below to answer question (i) to (iii)
i)   Identify the canal marked 1 and 2   (2 mks) -
Suez Canal
ii)   Jonglei Canal
ii)   Name the rivers marked J, K and L. (3mks)
      J - Niger
      K   -
       Benue
       L -
       Zambez
       i
iii)   Explain three physical conditions that hinder transportation on the river marked T. (3mks) -
      Some sections has rapids and waterfalls which hinder movement of vessels.
- Some sections have floating vegetation that makes it difficult for vessels to move through them.
- Some sections are shallow due to siltation which has reduced the depth required for vessels to move.
- Some sections are shallow due to siltation which has reduced the depth required for vessels to move.
- Some sections have outcrop rocks that hinder the movement of water vessels.

-
- Some sections are narrow to allow vessels to go through them.
- The volume of water fluctuates during dry season / the volume is low hence hinder the movement of vessels.

Any 1st 3 well explained x 2 = 6mks

b) __In which three ways has the use of cell phones contributed to economic development in Kenya? (6mks)__
- Creation of employment opportunities. The production, marketing and provision of cell phone services have employed many people thus improving their living standards.
- Taxes levied on the sale of phones and service provision has generated revenue for the government.
- Mobile phones have promoted trade, through them transaction takes place.
- Has enhanced financial transaction such as money transfers and banking.
- Has promoted tourism. Tourists are able to access information on tourist sites in the country.
- Has led to development of industries which manufacture the handsets.

Any 3 stated and well explained x 2 =

(6mks)

c) __Suggest four measures that can be taken to improve railway transport in Kenya.__
(4mks) - Privatizing the railway co-operation to ensure efficient management.
- Train more personnel in the area of railway transport.
- Establish police unit that patrol the railway to reduce cases of vandalism.
- Introduction of electric trains which are fast.
- Construction of standard gauge railway which is faster.
- Introduce lighter coaches which are faster.
- Use of containers to speed up rail freight services. *Any 1st 4 x 1 = 4mks*

e) __Explain two ways in which the great Lake of N. America and St. Lawrence Sea way has led to industrial development in the region. (4mks)__
- Has provided cheap means of transporting raw materials to industries and finished goods to the market.
- Has promoted trade in the region. Trading activities have in turn led to industrial growth.
- Has increased Hydro Electric Power production which is used in industries.
- Has led to development of ports and towns which have encouraged the growth of industries.
- Has also provided abundant water for industrial use. *Any 1st 2 well explained x 2 = 4mks*

8a) __State three physical conditions that favour large scale sugarcane farming in Kenya (3mks)__ -
Temperatures that range between 21°C- 27°C
High rainfall 1250-2000mm in a year.
- Rainfall which is evenly distributed.
- Deep clay, black cotton soil in Kenya.
- Availability of well drained soils.
- Gently sloping land in Kenya.
- Altitude is between sea level and 1600 above sea level. *Any 3 well stated x 1 = 3mks*

Must give correct range/avoid words like (should be) **b)** __Describe how sugarcane is processed to white sugar (6mks)__
- At the factory sugarcane is put in large water tank where it is washed.
- After washing, sugarcane is passed through machines which cut it up into short pieces.
- The pieces are passed through rollers which crush the cane and squeeze out the juice.
- The juice is put in alacrities which separates mud from the juice.
- The juice is put in boilers with lime and boiled until it turns into thick syrup.
- The syrup is passed through vacuum pan to form massecuite (molasses and sucrose crystals) - The massecuite is put in open tanks (crystallizers) where sugar crystals grow.
- The massecuite is put in centrifuges where crystals are separated from molasses.
- Raw coarse sugar is obtained which is then bleached to white sugar. *Sequence to be followed max - (7mks)*

c) __Explain four problems facing sugarcane processing factories in Kenya. (8mks)__ - Shortage of skilled labour which has led to hiring of foreign experts at high cost.
- Inadequate capital which makes it difficult for them to run smoothly and pay sugarcane farmers.
- Stiff competition from cheap imported sugar which reduces the local market.
- High electricity charges that increases the cost of production.
- Inadequate sugarcane as a raw material which interrupts the operation of factories.
- Mismanagement of factories by corrupt officials which has led to closure or making high losses.
- Poorly developed roads that delays delivery of canes to the factories.
- Frequent breakdown of machines which leads to stoppage of production.

-

- Occasional power outages which reduces the output.   *Any 1st 4 well explained x 2 = (8mks)*
  d)   **Draw a sketch map of Ghana   (1mk)**

Cocoa growing area

KEY
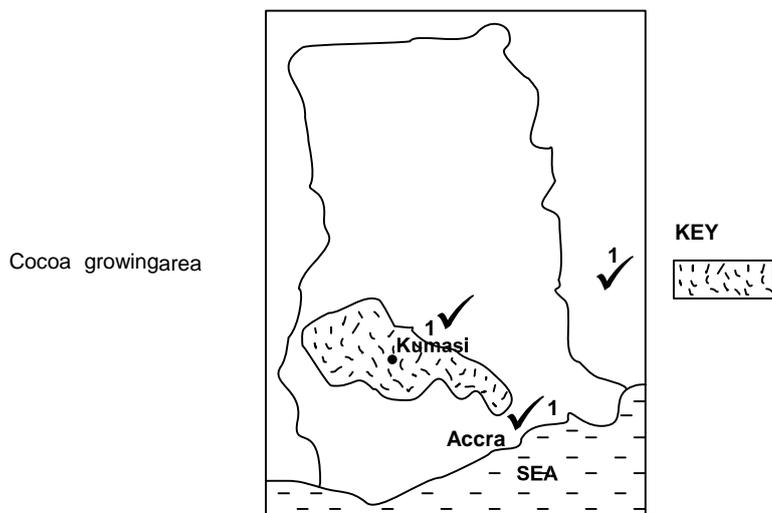
Total = 3 marks
On the sketch map mark and label
- Accra   *(1mk)*
- Cocoa growing areas   *(1mk)*

iii)   **Name two varieties of cocoa grown in Ghana. (2mks)**
- Cocoa criolo, cocoa forastero *(2mks)*

e) Your class intends to carry out a field study on a sugar processing factory. State three objectives for the study.(3mks)
- To find out the type of sugar produced in the factory.
- To find out the source of raw materials that are used in the factory.
- To establish where the factory sells its sugar.
- To find out how many workers are employed in the factory.
- To find out problems encountered by the factory.
- To identify stages of processing sugarcane.
- To establish the benefits of the factory to the local people. *Any 1st 3 relevant x 1 - (3mks)*

9a) Name two non-renewable sources of energy used in Kenya a part from petroleum. (2mks)
- Coal
- Natural gas

ii) **Give three reasons why petroleum is most exploited source of energy in the world.**
       (3 mks)
- It has the widest range of domestic and industrial use.
- It can be stored and used later.
- It can be transported easily and cheaply.
- It occurs in great abundance.
- It can also be used to generate other forms of energy such as thermal electricity.
- Refining of petroleum provides many useful by-products.   *Any 3 x 1 = 3mks*

bi) **Name four proposed sites for H.E.P generation on river Tana. (4mks)**
- Mutonga
- Grandfalls
- Adamson falls -   Kora falls

ii) **Explain four physical factors that favour H.E.P production on River Tana (8mks)**
- Steep gradient/water fall/rapids along the river which provide fast flowing water with massive hydraulic force to turn turbines.
- Constant supply of large volume of water from River Tana, which ensures continuous generation of electricity.
- Hard besement rocks that provide firm foundation for the construction of dams.
- Presence of deep valleys along the river which provides space for the reservoirs.
- Impervious basement rocks which prevent seepage of water from the reservoirs.   *Any 1st 4 well explained x 2 = 8mks* **c)**
       i) What is energy crisis? (2mks)
- Refers to the situation where the demand for oil is higher than supply leading to high oil prices/a situation where the demand for a given fuel exceeds the supply/acute shortage of energy in the world which leads to increased prices.

ii) **State four causes of energy crisis in Kenya**
(4mks) -   Withholding of oil by oil producing
countries.
- Rapid depletion oil reservoirs.
- Political disagreements.
- Sharp rise in the demand of oil in Kenya.
- Unequal crude oil distribution by the petroleum producing countries.
- Waste and misuse of energy.
- Overdependence on oil and its products.   *Any 1st 4 stated x 1 = 4mks*

iii) **What two benefits would be there if more commuters in urban centres in Kenya used public transport?**
(2mks) -   It would help to ease traffic congestion in urban areas.
- It would help reduce/save fuel.
- Would create room for parking of vehicles.
- Would reduce on road accidents.
- Would help to reduce on pollution caused by many vehicles.
- Reduce on road deterioration/damage.   *Any 1st 2 x 1 = (2mk)*

10a)i) Name two minerals that occurs as placer deposits. (2mks)
-       Gold, tin, platinum, diamond, gemstones, chromate. **ii)**
Describe deep shaft method of mining (6mks)
- A vertical shaft is sunk to reach the mineral seam or bed.
- Horizontal tunnels are dug from the shaft to reach the mineral bearing rock.
- Props are erected to support the roof of the tunnel.
- The rock ore is blasted by use of explosives or dug out using mechanical shovels/pick axes.
- The ore is transported on light rail trucks or conveyer belt to the base of the shaft.
- The ore is then loaded onto a lift on cage and hoisted to the surface.   *Sequence to be followed max (6mks)*

iii) **Give three problems associated with deep shaft method of mining.**
(3mks) -   Flooding of the mine with subterranean water.
- Emission of poisonous gases in the mines.
- The dust produced causes respiratory diseases.
- Sometimes the tunnel collapses causing death of the miners.   *Any 1st 3 x 1 = 3mks* **b)**   **Explain how**
       the following factors influence exploitation of minerals. (2mks)
i) **Value of the mineral (2mks)**
- Valuable minerals such as gold, diamond, silver and uranium are mined more than other minerals because they fetch high prices on the market hence profitable.
ii) **Quality of the ore (2mks)**

- It is economical to mine minerals whose ore is of high quality as they yield high amount of minerals. Low quality ore are rarely mined unless their value is high.

iii)   Mining method (2mks)
- Some methods of mining are cheaper hence mostly used such as open cast. Underground methods are expensive to use unless the mineral is of high value.

c)   Explain four effects of open cast mining on the environment (8mks)
- The land is left with gaping quarries which are ugly which interferes with the beauty of the landscape.
- Clearing of land before extraction of minerals encourages soil erosion.
- The dust, smoke and gases produced pollute the environment and are health hazards.
- Large scale blasting of rocks leads to instability of the basement rocks.
- It destroys the natural vegetation which is cleared before extraction of the minerals.
- Water collect in the hollows left by open cast mines which become habitat for disease vectors.
- Causes disruption or lowering of the water table causing water shortage on the surface.
- Causes land dereliction - wastes agricultural, industrial and land for settlement.
- Blasting of mines using explosives causes landslides which are dangerous to human life.

   Any 1st 4 well explained x 2 =(8mks) **BUSIA COUNTY EVALUATION TEST**
   Kenya Certificate of Secondary Education
   312/1
   GEOGRAPHY
   Paper 1
   July/August 2015 SECTION
   A
   Answer ALL the questions in this section.

1. a) State the uniqueness of Geography as compared to other subjects.   (2 marks)   b) List three broad aspects studied under physical Geography.   (3 marks)
2. Describe the shape of the earth.   (4 marks)
3. The table below shows rainfall and temperature figures for a given station. Study it and answer questions (a)

Month	J	F	M	A	M	J	J	A	S	O	N	D
Rainfall (mm)	80	120	340	150	130	90	100	120	320	120	100	80
Temp. (°C)	28	29	32	31	28	28	29	30	31	30	29	28

a)   i) Calculate the annual temperature range for the station.   (1 mark)
ii) Describe the rainfall pattern for the station.   (3 marks)
b) Give two main reasons why convectional rainfall is common in Western Kenya region.   (2 marks)
4. a) Give two types of coastal beaches.   (2 marks)
       b) The diagram below shows features formed by wave deposition. Identify the features marked J and K.

Coast   (2 marks)
Breaking
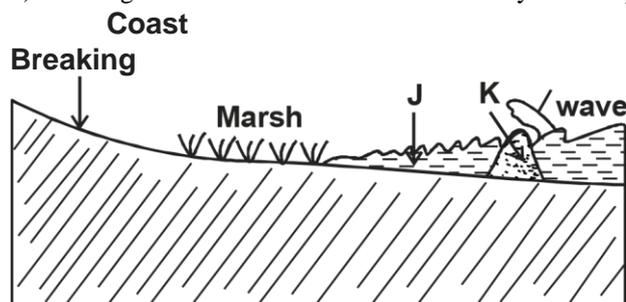
5. a) What is soil catena?   (2 marks)
       b) Give four ways in which parent material influence the nature of soil.   (4 marks)
   SECTION B
   Answer question 6 and any other TWO questions from this section
6. Study the map provided, Migwani 1 : 50,000 (Kenya) and answer the following questions.

a)   i) Give the two types of scales shown on the map.   (2 marks)
ii) Using the Key name two types of roads found in the area covered by the map.   (2 marks)
iii) Name two human features found at grid square 0963.   (2 marks) b) i)
What is the vertical interval (V.I) of the map extract?   (1 mark)   ii)
Describe the relief of the area covered by the map.   (5 marks) c)
Explain three factors that may make cattle keeping suitable for the area covered by the map.   (6 marks)
d) Draw a square measuring 10cm to represent the area enclosed by nothings 70 to 80 and east of easting 03.   (2 marks)
i) On the square mark and name
        R. Ikoo   (1 mark)
  Nzia hill.   (1 mark)   Dry weather road D503   (1 mark)
        ii) Calculate the scale of the square you have drawn.   (2 marks) 7.
a) i) Differentiate between river regime and river discharge.   (2 marks)
ii) State four characteristics of a river in its youthful stage.   (4 marks)
iii) Give two reasons why a river may have a large volume in its old stage.   (2 marks)   b)
Describe three ways in which river gorges may form.   (6 marks)
c) Using diagrams, describe how a flood plain forms.   (7 marks)
d) Explain two conditions necessary for river capture to occur.   (4 marks)
8.   a) i) What is mass wasting?   (2
marks)   ii) State three factors that influence mass wasting.   (3
marks)   b) i) Name two forms of slow mass wasting.   (2
marks)   ii) Explain three causes of landslides.   (6
marks)   c) Explain how mass wasting influences the following:
    i) Drainage   (2 marks)
    ii) Soil fertility   (2 marks)
    d) Your class is planning to carry out a field study on mass wasting in the area around your school.
    i) State three objectives you may have for such a study.   (3
 marks)   ii) Name two primary sources of information you may use during data collection.
     (2 marks)   iii) Give three techniques you will use in order to collect correct information during oral interviews.
     (3 marks) **9.**   a) i) Name two examples of relief features found on the floor of the rift valley.   (2
 marks)   ii) Using well labelled diagrams, describe the stages involved in the formation of Fault Mountains.
                                  (8 marks)
b)   i) The diagram below represents a region that has undergone faulting. Name the features marked A, B and C
                                                          (3 marks)
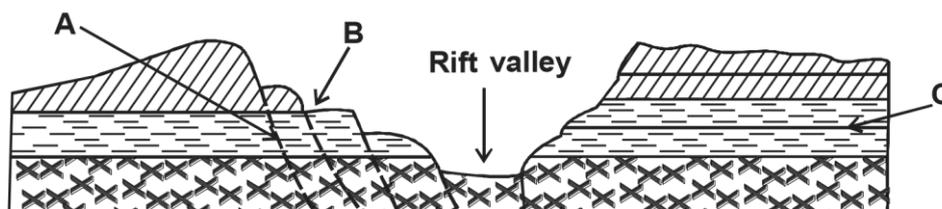
    ii) State four characteristics of lakes formed by faulting.   (4 marks)
  c) Explain four effects of faulting to human activities.   (8 marks)
10. a) i) What is a rock?   (2 marks)
ii) Name two examples of plutonic rocks.   (2 marks)   b)
i) State three characterises of sedimentary rocks.   (3 marks)
ii) Describe how mechanically formed sedimentary rocks are formed.   (4 marks)   c)
Explain four ways in which rocks contribute to the economy of Kenya   (8 marks)
        d) You carried out a field study on metamorphic rocks in the area around your school.
   i) Give two reasons why you might have conducted a reconnaissance for the study.   (2 marks)   ii) State four problems you
might have encountered during the field study.   (4 marks) **BUSIA COUNTY EVALUATION TEST**
    Kenya Certificate of Secondary Education
    312/2
    GEOGRAPHY
    Paper 2
     July/August 2015
    SECTION A

    _____
    Answer ALL questions in this section
1.   The diagram below show the occurrence of petroleum in the earth's crust. Use it to answer questions (a)
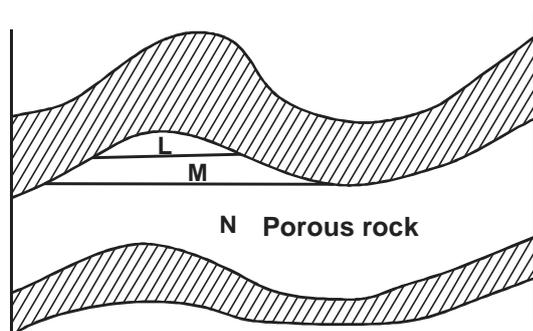
a) Name the substances in the areas labelled L, M and N.   (3 marks)
b) Give two by-products obtained when crude oil is refined.   (2 marks)

2. a) State two reasons why some industries are located near the sources of raw materials. (2 marks) b) State three factors that led to the growth of iron and steel industry in the Ruhr region of Germany. (3 marks)

3. a) Name **two** horticultural crops grown in Kenya.   (2 marks)
   b) State **three** reasons why horticulture is more developed in the Netherlands than in Kenya.   (3 marks) **4.**
   a)   Give three measures that have been taken in Kenya to reduce infant mortality.   (3 marks)   b) Give two primary sources of population data.   (2 marks)

5. a) What is urbanization?   (2 marks) b) Give two differences in the function of New York and Nairobi cities.   (3 marks)

SECTION B
Answer question 6 and any other TWO questions from this section

6. The table below shows total number of livestock in Kenya in 1995

Type of livestock	Number in millions
Cattle (excluding dairy cattle)	7.0
Dairy cattle	2.0
Sheep	7.0
Goats	8.5
Pigs	0.1
Chicken	20.0
TOTAL	44.6

a) Using a radius of 5cm, draw a pie chart to represent the information given in the table above.   (7 marks)
b) Explain two reasons why the population of sheep is higher than that of dairy cattle. (4 marks)
c) Explain four ways in which the government of Kenya assist nomadic pastoralist to improve the quality of livestock.
                                                                                                                                            (8 marks)
d) Explain three factors that favour beef farming in Argentina.   (6 marks)

7. a) i) Define the term tourism   (1 mark)
ii) Name two tourist attraction found in the Rift valley of Kenya.   (2 marks) b) Explain four factors which hindered the development of domestic tourism in Kenya. (8 marks)
c) Explain three problems experienced by the Kenya Government in its effort to conserve wildlife. (6 marks)
d) Explain four factors which have made Switzerland a major tourist destination in Europe.   (8 marks) **8.**
a)   i) Apart from water and air pollution, name two other types of pollution.
(2 marks)   ii) Give three ways through which water is polluted.
            (3 marks)   iii) Explain three effects of air pollution on the environment.
                        (6 marks)   b) i) Explain three factors that lead to frequent flooding in the lake region of Kenya.   (6 marks)   ii) State three ways through which floods are controlled in the lake region of Kenya.   (3 marks)   c)   You are planning to carry out a field study on effects of wind on the environment.

i) State two methods of data collection you are likely to use.   (2 marks)   ii) Give three ways in which your findings will benefit the local people.   (3 marks)

9.   a) i) Define international trade   (2 marks)   ii) Name three major imports from Europe to Kenya.   (3 marks) b) State four factors that influence external trade in Kenya.   (4 marks)

c)   Explain four ways through which Kenya will benefit from the renewed East Africa Cooperation.   (8 marks)

d)   Explain four negative effects of international trade.   (8 marks)

10.   a) i) What is forestry?   (2 marks)   ii) Explain three factors that favour the growth of natural forests on the slopes of Mt. Kenya. (6 marks)   iii) State five factors that have led to the reduction of the area under forest on the slopes of Mt. Kenya. (5 marks) b) Explain four measures that the government of Kenya is taking to conserve forests in the country.   (8 marks)

c)   Give the differences in the exploitation of softwood forests in Kenya and Canada under the following sub-headings:

i) Period of harvesting.   (2 marks)   ii) Transportation   (2 marks)

BUSIA COUNTY
KENYA CERTIFICATE OF SECONDARY EDUCATION (K.C.S.E)
GEOGRAPHY
Paper - 312/1
JULY/AUGUST 2015

MARKING SCHEME
Section A
1).
a) State the uniqueness of Geography as compared to other subjects.
- It emphasizes distribution of things on the earth''s surface and maps them to show their relationships / pattern.2x1=2mks **b)**
List three broad aspects studied under physical geography.
- ☐ Relief
- ☐ drainage
- ☐ weather/climate
- ☐ natural vegetation
- ☐ rocks and soil
- ☐ the earth and the solar system   3x1=3mks
2. Describe the shape of the earth.   (4mks)
- ☐ The earth is spherical but not a perfect sphere ☐ It is slightly flattened at the poles.
- ☐ It is bulged at the equator.
- ☐ Such a sphere is called a geoid/oblate sphere.   4x1=4mks
   2. The table below shows rainfall and temperature figures for a given station. Study it and answer questions (a).

Month	J	F	M	A	M	J	J	A	S	O	N	D
R/fall mm	80	120	340	150	130	90	100	120	320	120	100	80
Temp. ^{0}C	28	29	32	31	28	28	29	30	31	30	29	28

   a)   i)
Calculate the annual
temperature range for
the station.
   b)   (1mk)   -
32^0-28^0=4^{0}C
ii) **Describe the rainfall pattern for the station**   3mks
- Rainfall is received throughout the year/No real dry month.
- Highest rainfall received in March 340mm.
- The lowest rainfall received in December/January 80mm.
- Double maxima rainfall regime/two rain seasons per year. 3x1=3mks
  b) Give two main reasons why convectional rainfall is common in Western Kenya region.
- high temperatures that facilitate evapotranspiration.
- Presence of lake Victoria from which evaporation takes place. -   Vast areas under forests for transpiration.
4)
a) Give two types of coastal beaches.   (2mks)
- ☐ Storm beach
- ☐ Bay head beach
- ☐ Barrier beach   2x1=2mks
b) **The diagram below shows features formed by wave deposition. Identify the features** marked J and K.

Breaking (2mks) **Coast K wave**

Sea
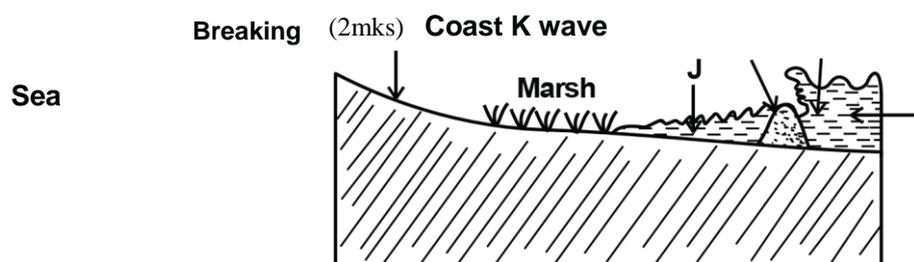
J -lagoon

K -Off-shore bar

5)

a) What is soil catena? (2mks)

The sequence of various soil types along a slope from the hill top to the valley bottom   1x2=2mks

b) Give four ways in which parent material influence the nature of soil. (4mks)

☐ Determines the soil colours

☐ Determines the soil minerals

☐ Determines the soil texture

☐ Determines the soil depth   4x1=4mks

   SECTION B

6) Study the map provided: Migwani 1:50,000 (Kenya) and answer the following questions.

a. i) Give two types of scales shown on the map. -   Linear scale

- Representative fraction/ratio scale/R.F Scale.   2x1=2mks. **ii) Using the key name two types of roads found in the area covered by the map.**   (2mks) - Dry weather roads

- All weather road and bound surface

- Main tracks   2x1=2mks **iii) Name two human features found at grid square 0963.** (2mks)

- Houses

- Water pipeline   2x1=2mks

b) (i) What is the vertical interval (V.I) of the map extract.

- 20m   (1x1=1mk) **ii) Describe the relief of the area covered by the map.** (5mks) - highest point is about 1550m to the south west.

- The land generally slopes eastwards.

- The area has numerous hills e.g Kitui hills to the south west.

- The land is gently sloping to the east.

- There are steep slopes to the west.

- There is a valley along R. Ikoo.

- Numerous spurs on Kitui hills. 5x14=5mks.

   c) Explain three factors that may make cattle keeping suitable for the area covered by the map. (6mks) - Constant water supply for watering the cattle from the numerous permanent rivers.

- Plenty of natural pastures for grazing the cattle from the scrub vegetation.

- Few settlement/scattered settlement give room for grazing.   3x2=6mks.

   d)Draw a square measuring 10cm to represent the area enclosed by northings 70 to 80 and east of easting .03.

(2mks)

i) On the square mark and name;

- R. Ikoo   (1mk)

- Nzia hill (1mk)

- Dry weather road D 503   (1mk)

iii) Calculate the scale of the square you have drawn. (2mks)

-
-

7)
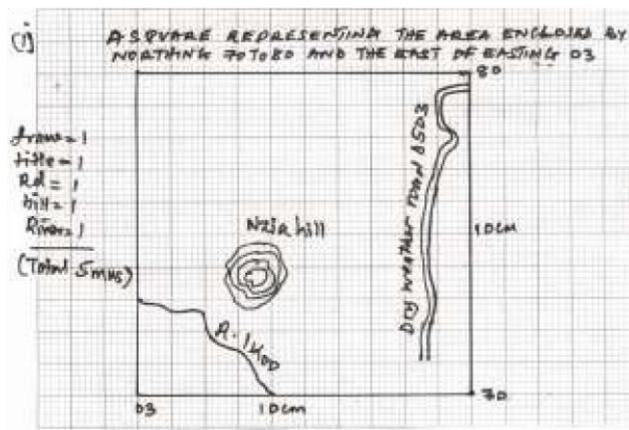
a) (i) Differentiate between river regime and river discharge. (2mks)
- River regime is the seasoal /annual variations in the rivers volume/discharge studied over a long period of time while river discharge is the amount of water passing a particular point of a river per second.   1x2=2mks.

ii) State four characteristics of a river in its youthful stage. (4mks) -
    The river has steep gradient.
- The river has high velocity.
- Narrow/V-shaped river valley.
- Interlocking spurs are common.
- Water falls/rapids very common.
    Pot holes, plunge pools on the river bed.
    Deep river channels/river gorges present.   4x1=4mks.

iii) Give two reasons why a river may have a large river volume in its old stage.   (2mks) -
Low gradient allows accumulation of water. -   Increased amount of water/volume from tributaries.

b) **Describe three ways in which a river gorge may form.** (6mks)
- When a river flows a long a fault line so that the river erodes vertically into the fault.
- When a river maintains its direction of flow as the land undergoes upliftment.
- When a river flows over a region with less resistant rocks so that there is rapid vertical erosion.
- When a waterfall retreats up stream so that a deep valley forms at the point of retreat.   3x2=6mks.

c) **Using diagrams, describe how a flood plain forms**   (7mks) - There exists a narrow river valley with a V-cross -
    section
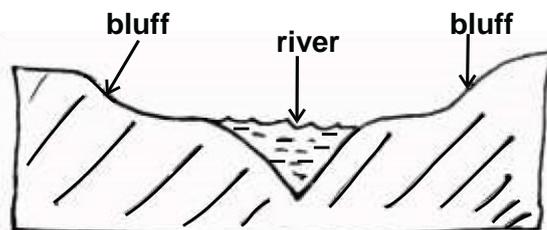
- During the rain season the river overflows its banks and water covers the whole river valley.
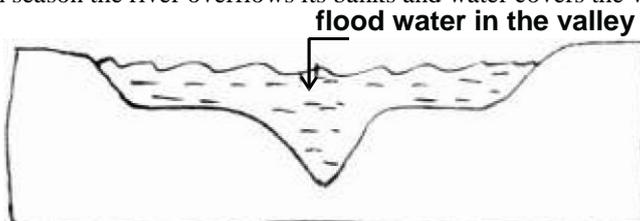
- Lateral river erosion extends the bluffs hence widening the river valley.

-
-
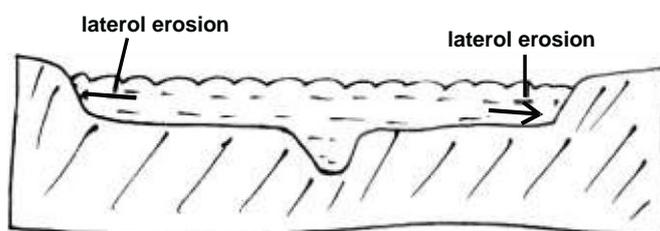
- As the rains subside, the flood water begin to retreat back into the river channel.
- As the water retreats, the river deposits alluvium on the widened river valley.
- This leads to a wide, gently slopoing river valley comprising of alluvium which we call a flood plain.

Flood plain
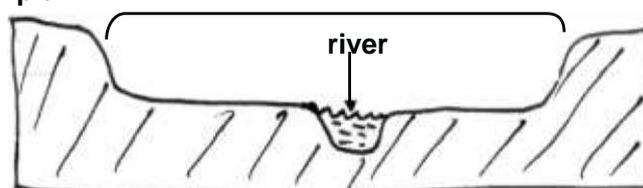
Text 5x1=5mks   diag 2x1=2mks (N.B
diagram 3 & 4).

d) **Explain two conditions necessary for river capture to occur.**
- The two rivers must be flowing adjacent each other to allow easy joining of the valleys.
- The capturing river must be flowing at a lower gradient to allow the head waters of the other stream to flow into it by gravity.
- The capturing river must erode head wards towards the valley of the one being captured
- in order to make the two river valleys join   2x2=4mks

8)

a. (i) What is amass wasting?

☐   The downward movement of weathered rock materials along a slope unde rthe influence of gravity.   **or**
- The movement of weathered rock materials on the earth"s surface down a slope by gravity 1x2=2mks.   **ii) State three factors that influence mass wasting.**   (3mks)
    The nature of the slope in the affected area. The
    amount of rainfall received in the area. -
        The size/nature of rock materials involved
    in the movement.
- Human activities such as quarrying/road construction.
- Tectonic movements trigger movement of material.   3x1=8mks b)(i) Name two forms of slow mass wasting (2mks).
- Soil creep
- Rock creep
- talus creep
- Solifluxicon 2x1=2mks **ii) Explain three causes of landslides**   (6mks)
- Prolonged heavy rainfall soaks the ground.
- Presence of steep slopes that make material unstable hence easily slide down slope.
- Tectonic movements/earthquakes make materials on slopes unstable hence easily move down slope. -   Human activities such as steepening of slopes during quarrying/road construction.   3x2=6mks **c) Explain how mass wasting influence the following:**

i) Drainage   (2mks)

☐ Debries blocking river valleys lead to formation of lakes.

☐ Debries deposited in lakes lead to siltation that lead to reduction in the lake depth   1x2=2mks **ii) Soil fertility**
- Soil particles deposited in lowlands by mass wasting lead to deep fertile soil for crop farming.
- Removal of sol in highlands by mass wasting lead to thin soil that are unsuitable for crop farming. 1x2=2mks d) Your class is planning to carry out field study on mass wasting in the area around your school.

i) State three objectives you may have for such a study.

-
-

(3mks)
- To find out forms/types of mass wasting that occur in the area around my school.
- To identify the effects of mass wasting in the area around my school.
- To find out the causes of mass wasting in the area around my school.   3x1=3mks   **ii) name two primary sources of information you may use during data collection.**   (2mks)

☐ Resource persons

☐ Direct observations   2x1=2mks

  ii) Give three techniques you will use in order to collect correct information during oral interviews. (3mks) ☐ Keeping eye contact

☐ Asking for clarification

☐ Asking direct question

☐ Assuring respondents confidentiality

☐ Interviewing more respondents for comparison   3x1=3mks

9 (a)

 i) Name two examples of relief features found on the floor of the rift valley. (2mks)

☐ Depressions occupied by lakes

☐ Volcanic mountains

☐ Crater/calderas

☐ Valleys.   2x1=2mks

ii) Using well labelled diagrams, describe the stages involved in the formation of fault mountains. (8mks)

☐   Crustal rock layers are subjected to compression forces.

☐ This leads to formation of two adjacent reverse faults in the rock strata.

☐ The middle block experience upliftment.

☐ This leads to formation of a raised land mass between two reverse faults which is called a fault mountain.

  text 4x1=4mks   diag

4x1=4mks

  Total   8mks **b (i)The diagram below represent a region that has undergone faulting. Name the features marked A,B and C.**

(3mks)

bluff   **river**   **bluff**
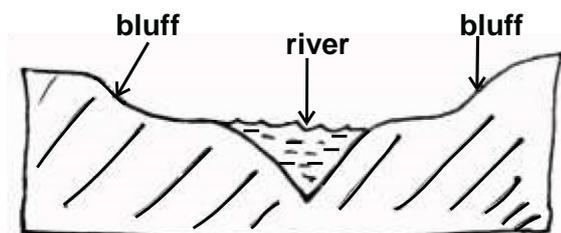
 A -Fault
 B -Fault step
 C -Crustal rock layers/strata   3x1=3mks   **ii) State four characteristics of lakes formed by faulting.** (4mks)

    Most of them are deep
    Most of them are saline /salty

-
-

- Most of them are narrow/elongated
- Most of them have steep sides.   4x1=4mks
c) Explain four effects of faulting to human activities. (8mks)
- Windward sides of fault mountains receive high rainfall that supports crop farming.
- Fault mountains are sources of river used for H.E.P generation/fishing industrial use.
- fault mountain areas are thickly forested on windward sides hence supporting forestry lumbering.
- Fault steps/rift valleys/escarpments attract tourists for foreign exchange used to improve other sectors of the economy.
- Faults form lodes/veins in which minerals occur hence supporting mining.
- Fault steps form gently sloping areas that encourage human settlement.
- Lee ward sides of fault mountains receive low rainfall that limit profitable crop farming.
- Steep slopes on fault mountains/fault difficult hence discouraging human settlement.   *4 × 2 = 8 marks* **10 (a)i) What is a rock?**   (2mks)
- The solid substance made up of aggregate of minerals that forms the earth‟s crust.   1x2=2mks.   ii) Name two examples of photonic rocks   (2mks)
     Gabro-Diorite-synenite
     Granite-Periodotite   2x1=2mks

B (i) State three characteristics of sedimentary rocks (3mks)
☐   They occur in layers
☐   Some contain fossils
☐   -   Some are elastic 3x1=3mks **ii) Describe how mechanically formed sedimentary rocks are formed.**   (4mks)
☐   Already existing rocks undergo weathering forming sediments/particles.
☐   The sediments are transported by running water/glacier towards the lowland.
☐   The sediments are deposited in layers in the lowlands.
☐   The sediments undergo compaction and cementation and harden into a rock.
☐   It is this rock that we c$_{weathering}$ all mechanically formed rocks.   4x1=4mks
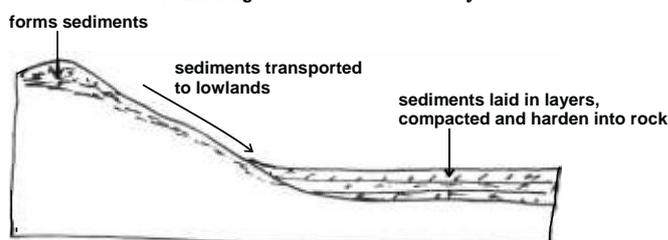
c) **Explain four ways in which rocks contribute to the economy of Kenya**(8mks) -
     Some rocks contain minerals that are mined to earn income. -   Some rocks attract
tourists for foreign exchange.
- Some rocks are sued to curve artefacts sold to earn income.
- Some rocks provide mineral food supplements hence reducing on cost of buying such supplements.
- Some rocks store water hence are sources of water for irrigation farming.
- Some rocks weather to form fertile soils for commercial crop farming.
- Some rock surface are sued for advertisement hence supporting trade.
- Some rocks are excavated and sued for building commercial houses.   1x2=8mks d) You carried out a field study
     on metamorphic rocks in the area around your school. (2mks)
☐   To ask for permission/to notify respondents
☐   Estimate the time/duration for the study
☐   Establish the suitability for the study
☐   Establish the suitability of the area for the study
☐   To enable us draw an appropriate time schedule/working schedule.
☐   To identify appropriate routes
☐   Identify suitable tools and equipments   2x1=2mks

ii) State four problems you might have encountered during the filed study.   4mks ☐
Steep slopes that made movement difficult.
☐   Muddy rods that slowed movement
☐   Few resource / expert persons in metamorphic rocks.
☐   Heavy rains that led to delays as we sheltered.
☐   Long distances covered walking that caused fatigue/tiredness.

☐   Fear of wild animal attacks from bushes in the neighbourhood.   4x1=4mks

BUSIA COUNTY
KENYA CERTIFICATE OF SECONDARY EDUCATION (K.C.S.E)
GEOGRAPHY
Paper - 312/2
JULY/AUGUST 2015
MARKING SCHEME

Section A (25 Mks)
1. L - Natural gas
    M-Oil/petroleum
    N- Water Any 3x1(3mks)
b) Wax
    Bitumen/tar/asphalt
    Sulphur
    Lubricants/grease
    Resin/petrol-chemicals   (Any 2x1=2mks)
2. (a) State two reasons why some industries are located near the source of raw materials. -
        The raw materials may be too bulky and thus expensive to transport .
-   Some raw materials are perishable so they have to be processed before transportation
-   Processing reduces transport costs   Any 2x1=2mks b)
-   Availability of coal/iron ore/limestone/raw materials cheap water transport on River Rhine
-   Availability of capital form rich merchants/Kpp family
-   Abundant sources of power such as coal/H.E.P
-   Ready market form control/Western Europe/local market
-   Availability of water from river Rhine/lippe ?Ruhr
-   Industrial interdependence/industrial linkage   Any 3x1=3mks
3   (a) Vegetable/tomatoes/onions/carrots. (allow any correct vegetable (max 1mk)Fruits/orange, pineapples, plums, mangoes, flowers, roses(allow any correct fruit(max1mk)
    (b)
-   Netherlands has a higher urban population than Kenya/there is high demand both local and foreign for horticultural crops products in Netherlands than in Kenya.
-   Farmers in Netherlands have more access to the capital needed for horticultural farming than in Kenya.
-   There is more advanced and appropriate technology in Netherlands which has enhanced horticulture farming than in Kenya.
-   Netherlands unlike Kenya has highly skilled labour for production and handling of agricultural products.
-   There is more advanced horticultural farming related research in he Netherlands than in Kenya.
-   Netherlands unlike Kenya has well organized marketing procedures/co-operatives/auction markets which are conducive for horticultural farming.   Any 3 well compared points 3x1=3mks
4   (a)
☐   Improving medical facilities/immunization of children to control diseases ☐   This has created a healthy/environment for child survival.
☐   Providing more education opportunities for parents ensures better care for their children e.g in providing balanced diet.
☐   Introduction of family planning programs has led o emergence of manageable sizes of families which promotes higher chances of child survival.
☐   Carrying out research on infant related diseases to cope up with ways of controlling them ensures higher chances of survival.
            b) National census head count
            Sample survey
            Vital statistics/registration of birth/death/marriages/migration.
5   (a) It is he process whereby an increasing proportion of the total population i he county settles/concentrates in town/the process through which towns or cities grow in numbers and sizes/a process by which a population is transformed from rural based agricultural lifestyle to urban based non-agricultural lifestyle.
b) New York Nairobi

- It is a sea port-It is an inland port
- It is a state capital-It is a nationalcapital -
  It is an international -It is a national
  commercial centreCommercial financial centre

SECTION B

Pigs
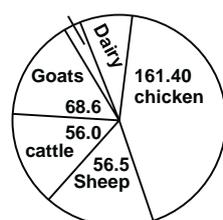
Cattle- 56.50^0

Dairy- 16.4^0

Sheep-56.5^0

Goats- 68.61^0

Pigs- 0.002^0

Chicken-161.43^0

(3mks)

b)

☐ Sheep survive in a variety of climatic condition while dairy cattle are restricted to cool and wet climate.

☐ The farm inputs required for dairy cattle are more expensive than those for sheep

☐ Some breeds of sheep are more resistant to diseases that dairy cattle thus they are more widespread.

☐ The management of dairy cattle is more demanding than that of sheep.

c) The government has set up demonstrations ranches to educate the pastoralists on better ways of keeping livestock cattle /dips have been constructed to control pests.

☐ Extension services are provided to give advice o the pastoralists

☐ Boreholes and dams have been constructed to provide water for their livestock.

☐ Roads have been constructed to enable the pastoralists to transport their produce to markets

☐ Through formal education, the pastoralists have learnt the advantage of keeping manageable sizes of herds.

☐ The government encourages ranching to enable the pastoralists to view livestock keeping as a commercial undertaking. d)- Replacement of course grasses with alfalfa and corn has improved the quality of pasture of the beef cattle. ☐
       Crossbreeding of traditional with higher quality breeds /Hereford/Aberdeen ☐   Angus shorthorn has improved he quality of the yields.

☐ The maritime climate of the area makes grazing of cattle possible throughout the year

☐ availability of water supplied using wind pumps ensures constant supply of water for cattle.

☐ Availability of vast lands suitable for cattle grazing encourages beef ranching

☐ Availability of market both local and external encourages the farmers to expand the beef industry/sustains the industry.

☐ Availability of refrigeration facilities enables beef to reach far off markets i good condition.

7 (a)

i) Tourism is the visiting of places of interest for e recreational purposes / leisure / pleasure ii)

The varied relief features

- Wild animals
- Birds/flamingos
- Hot springs/Geysers/Fumaroles/Geothermal
- Vegetation
- People culture
- Pre-historic sites/Historical sites e.g Kapenguria
- Mining sites
- Sports tourism e.g fishing *2 × 1 = 2 mks*

b) The roads leading tourist sites are poorly maintained. Discourages people form visiting such sites.

☐ Inadequate local comparing and advertisement of tourist attractions/special packages leads to low public awareness.

☐ Familiarity with the tourist attraction among the local people makes them fail to appreciate their beauty and value.

☐ Negative attitude towards local tourism limits the umber of people who engage in tourism.

☐ Insecurity from gangsters/poachers in national parks and game reserves scare people away form visiting them.

☐ The high cost of accommodation the the game lodges encourages local tourism/the high cost of hiring tourism vehicles discourages people from touring/low income

c)Illegal hunting/poaching of wild game threatens the conservation efforts leads to the extinction of some species of animals. ☐ Overstocking of some wild animals leads to destruction of natural environment through overgrazing.

☐ Frequent drought experienced in some of the nation parks and reserves leads to loss of animals through starvation and death.

☐ Straying wild animals from the parks to settlement leads to destruction/high cost of fencing

- ☐ Inadequate capital limits government conservation efforts /over reliance on foreign donor ☐ Rapid human population growth leads to the encroachment of games parks and reserve ☐ Pollution of the environment leads to death of wild animals.
- ☐ Fire outbreaks destroy wildlife. *3 × 2 = 6 marks*

d)Favourable climate; with warm sunny summer which allow swimming and sun bathing ad cold winter which encourages winter sports such as skiing.
- The varied scenery consisting of snow- capped mountains, cascading waterfall and glaciated landscape provides varied tourist attraction which are lacking in other parts of Europe make the country easily accessible from the other European countries.
- Political neutrality of Switzerland removes any travel restrictions to the country as a tourist destination.
- diversity of language spoken in Switzerland makes it possible for tourist to communicate and move around the area.
- Well-developed transport network tourist sites provide easy accessibility
- Advanced training in tourist industry enables Switzerland to provide the necessary services to tourist thus attracting more to the country/package tours services offered e.g hotels
- Availability of healthy resorts
- Inherent hospitality of Swiss people encourages tourists to visit Switzerland
- Well-developed financial institutions (Banks) have promoted easy transaction, hence encouraging tourists to Switzerland.
- Switzerland is HQ of several international agencies; this has lead to the influx of delegates to the country later turn to tourist. *4 × 2 = 8 marks*

8 (a)

i) Land pollution/soil. Ground
- Noise pollution/sound
- Thermal pollution
- Radiation   Any 2x1=2mks ii)
- Discharge of industrial waste/oil spillage/radioactive waste into water bodies
- Disposal of agriculture chemicals into rivers/lakes by rain water
- Discharge of raw sewage into water bodies
- abuse of water bodies by human bodies
- Natural causes e.g soil erosion/terrestrial gas   Any 3x1=3mks iii)
- Gases emitted from some factories contain substances which corrode roofs of houses and mental structures.
- Some, gases from factories contain substance
- Which dissolve n water to form acid which make plans maim or kill animals.
- Inhalation for smoke and soot particles poisonous substance which can lead o poor health/death when inhaled plants leaves turn yellow
- Gases emitted from factories may contain poisonous substance which can lead o poor health/death when inhaled /plants leave turn yellow.
- Gases/excess carbon dioxide increases he temperature affecting the climate of the affected areas/depletion of O-Zone layer.
- Smoke- dust/smog reduces visibility which may lead to motor accidents
- Dust particles that settles on leaves inhibits photosynthesis.   Any 3x2=6mks   b)(i)
- Most of the land is low lying which causes the rain water of spread over wide area
- The adjacent highlands receive torrential rainfall which releases large volumes of water resulting to rives overflowing their banks.
- Silt has filled the river beds making hem shallow thus spilling their water over banks
- The rivers are at their old stage, thus they have wide flood plains which allow water to spread over large areas.
- The area has black cotton sil which is non-porous and when soaks up allow water to flow and spread on the surface.
- The heavy rainfall received in the area is discharged into Lake Victoria making its level o rise thus flooding the adjacent lowlands.   Any 3x6=18mks   ii)Dams have been constructed across the rivers to check their velocity thus reducing the incident of flooding.
- Several dykes have been constructed/artificial levees to restrict the rivers within their channels/diverting channels have been constructed in the flood plains and water sued for irrigation thus reducing the effect of the excess water. c) i)- Observing
- ☐ Reading from secondary sources.
- ☐ Taking measurements.   *2 × 1 = 2 marks*   ii)
- ☐ will identify the effects of winds.
- ☐ will be able to identify methods of controlling effects of wind.
- ☐ They will learn the causes of wind hazards.   *3 × 1 = 3 marks*

9 (a)

i) International trade is the exchange of goods and services between different countries   2mks   ii) Major imports from Europe to Kenya

☐ Machinery
☐ Capital equipment
☐ Pharmaceutical products/ medicine
☐ Fertilizers
☐ Automobiles

b) Factors that influence the import and export of goods in Kenya.

☐ Government policy/government legislation/imposition of tariffs on imports
☐ Demand for goods both locally and outside Kenya
☐ Variation of natural resources/goods/quality of goods
☐ Availability of transport/communications
☐ The purchasing power
☐ Quota system/tariffs imposed on Kenya‴s imports   Any 4x1=4mks

c) Ways through which Kenya will benefit from the renewed east African Cooperation

☐ There will be improved access to raw materials for industrial development
☐ The expanded market will attract new investments from local and foreign sources which will lead to expansion of industries/more earnings
☐ There will be improved access to raw materials for industrial development
☐ The expanded market will attract new investment from local and foreign sources which will lead to expansion of industries/more earnings
☐ There will be improved negotiating powers in the international area
☐ There will be improved transport links between Kenya, Uganda and Tanzania which will facilitate faster movement of goods and people.
☐ There will be increased employment opportunities because of free movement of people within the region/expanded trade.
☐ There will be mutual political understanding between Kenya and its neighbours. Any 4x2=8mks   d) Negative effects of international trade

- Overspecialization/overdependence on a particular item is risky in case of a fall in the prices in the world market.
- Imported items may become a threat to the local industries leading to closure of some of them
- Some imported goods e.g expired goods or substandard goods may had adverse effects on the citizens.
- If a country depends on another, it may sometimes have to tolerate some undesirable gesture from such countries.
- There may over exploitation of resources leading to their depletion e.g minerals. Any 4x2=8mks

10 (a)

i) What is forestry

☐ It is the science of planting, caring and using trees/forests and their resources
☐ It is the practice of managing and using trees/forests associated resources   ii) Explain three factors that favour the growth of natural forests on the slopes of Mt. Kenya

- The area receives high rainfall 1000-22000mm throughout the year which encourages continuous growth of trees.
- The area has deep fertile volcanic soils that allow the roots to penetrate deep into the ground to support the trees.
- The area has well drained soil thus there is no water logging which can chock plants and interfere with their growth. -   The area has moderate cool condition/comate are ideal for the growth of a variety of trees
- The area is a gazetted forest reserve/settlement and cultivation are prohibited hence allowing forest to grow without interference.
- The steep slopes discourages human activities thus enabling forests to thrive well Explanation 1mk Factor 1mk   iii) State five factors that have led to the reduction of the area under forests on the slopes of Mr. Kenya. -   The illegal encroachment of human activities
- The illegal cultivation has led to clearing of parts of the forest
- Prolonged drought\s have caused drying of some forests
- Plant diseases/pests destroy some trees in the forest
- Outbreak of forest fires/charcoal burning destroy some trees in the forest
- Over exploitation of certain species of trees

b)Explain four measures that the government of Kenya is taking to conserve in the county Registering/recognizing the efforts of NGOs like the green Belt Movement which have mounted campaigns on planting trees -   Gazetting forested areas to reduce encroachment of the public.

- Creating public awareness through mass media/public bazaars on the importance of conserving forest resources.

- Enacting laws to prohibit the cutting of trees without a license/protecting indigenous trees species
- Establishing NEMA/ministry of environment and natural resources to coordinate environmental management and conservation activities .
- Setting a side national trees planting day to encourage people to plant more trees
- Advising people to practice agro-forestry so as to avoid cutting trees form the forests - Employing forest guards to protect forests from fires/other illegal human activities.
- Encouraging recycling of paers/wood based products/use of other sources of energy to reduce demand of trees. - Carrying out research through KEFRI and ICRAF in order to come up with ways of - controlling diseases/pests/develop species suitable for different ecological regions.

c)Give the differences in the exploitation of softwood forests in Kenya and Canada under the following sub-headings
i)Period of harvesting
        Transportation

Kenya	Canada		
- Period of harvesting	-Harvesting is in winter	is done throughout the year	and
Early spring			
- Transportation mainly	- Mainly water transport	road transport	

KISII CENTRAL DISTRICT MOCK
Kenya Certificate of Secondary Education
GEOGRAPHY
Paper - 312/1
July/August- 2015
MARKING SCHEME
SECTION A
Answer ALL the questions in this section

1a) Name the instruments used to measure the following elements of weather
i) The intensity of sunshine   1mk
- Gunn-Bellani radiometer/sunshine intergrator
ii) The strength of wind1mk
      Anemometer
b)- Leads to formation of frost which destroy (sensitive crops such as fruits, flowers, vegetables. - Creates a state of atmospheric stability (no rising air) causing dry weather conditions (aridity)
- Leads to formation of fog which reduces visibility
- Causes very low temperature conditions near the ground surface thus hindering human activities.
      2.(a) Identify the dominant types rock of rocks in the following regions of Kenya i)   Coastal
Kenya1mk **- Sedimentary Rocks** ii) Eastern Kenya1mk **- Metamorphic rocks**
iii) Western Kenya   1mk
- Volcanic rocks
b) State three causes of vulcanicity   3mks
- Existence of very high temperatures in the upper mantle pushes out the magma.
- The molten state of rocks/magma (due to high temp and pressure) makes it easily erupt.
- Existence of faults/cracks (created by horizontal earth movements)   provides passage of easy escape of materials
- Existence of heated/superheated water that escapes as hot springs/gas/steam
3. (a) Differentiate between Rotation and Revolution of the earth   (2mks)
- Rotation is the turning of the earth on/about its axis while revolution is the movement of the earth on its orbit around the sun.
      b) (i) What is a latitude?   1mk
- It is the angular distance north or south of the equator/it is an imaginary parallel line drawn from west to east and measured in degrees north or south of the equator.
      ii) What is the time at Hola on 40^0E when the time at Tema on 0^0 longitude is 12.00 noon?
      The earth rotates 15^0 in 1 hour so Hola will be a head by 40^0 ,2 hrs 40 mins so it will be 2.40pm at Hola   2mks
4. (a) State two factors that determine the amount of surface run off   2mks
- Amount of precipitation/rainfall
- The nature of the slope of the land/of gradient of the land.
- The nature of the solid/the level of saturation
- The nature of the underlying rocks
- The amount of vegetation cover
- The rate of evaporation
- Human activities. (Example to score)
b) Using a diagram describe the features of trellis drainage patter Trellis   2mks
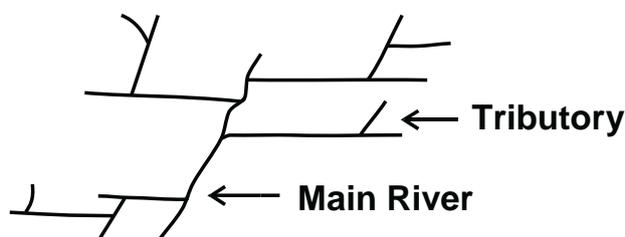
The main river has tributaries/streams that flow parallel to each other. The
tributaries join the main river at right angles.

5. (a) A part from earth movement,. give two ways by which lakes in Kenya were formed.2mks -
    By deposition
- By erosion
- By vulcanicity/volcanic activities
- By human activities
- By earth movements/downwarping

b) State three characteristics of lakes in the Gregory Rift Valley   3mks
- Some are narrow
- Some are long
- Some are deep/shallow
- Some are saline/fresh water lakes

    SECTION B
    Answer question 6 and any other TWO questions from this section

6. Study the map of Migwani 1:50,000 (sheet 151/1) provided and answer the following questions

(a) (i) Give the meridian of origin of the map of Migwai   2mks
    -39^{0}00" East of Greenwich
    ii) What is the length of dry weather road D502 from a church at Grid Square 9678 to its junction with loose surface road
    C94. Give your answer in kilometres and metres   2mks
 -6km 100mtres iii)
8km^2
iv) What is the bearing of Air Photo principal point at Grid square 1168 from another Air
    Photo Principal point at Grid square 1163?   2mks
-    000^0/360^0

b) i) Draw a rectangle measuring 10cm by 8cm to represent the area enclosed by Eastings 05 and 13 and Northings 69 and 78
    1mk
    On the rectangle mark and name:
- A ridge
- Road D507
-   Kisini dam
-   Mui river
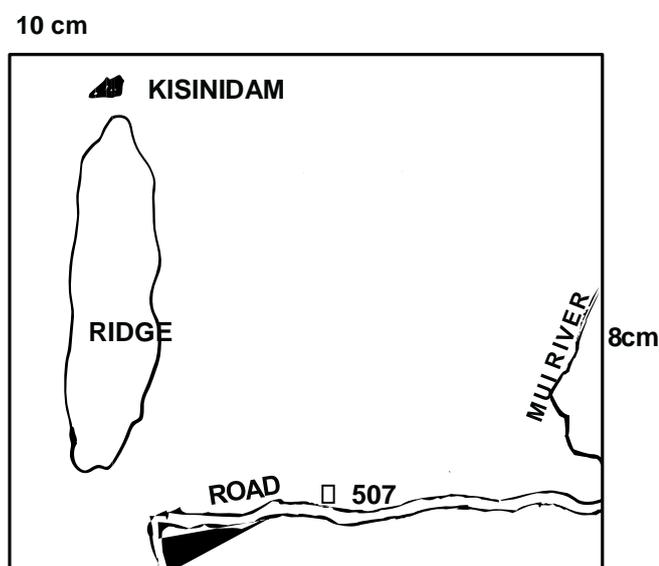
4mks

ii) A part from a ridge, name three other relief features found in the area covered by the map3mks -
    V-shape/wide valleys

- Rugged/dissected relief
- Undulating plain/rolling relief/plain land
- Hills
- Scarp slopes/Dip slopes

c) With evidence give four social activities carried out in the area covered by the map4mks -
   Water harvesting evidenced by water pipeline, dam
- Administration evidenced by chief''s office
   - Education evidenced by schools
- Communication evidenced by post office

d) Describe the drainage of the area covered by the map of Migwani   5mks
- the area has several permanent rivers
- The main rivers are Mui and Ikoo
- the general flow of rivers is from Western to Eastern
- Rivers form dendritic pattern
- Tributaries of river Ikoo have parallel pattern.

7. (a)
i) State thee factors that influence the nature of a fold during folding process   3mks
- Type/nature of rocks
- Amount of temperature within the rocks -
   the intensity of compressional forces.

ii) Describe the characteristics of the following types of olds
- Isoclinal fold
- has multiple folds
- Folds lie parallel to each other
- Have a symmetrical anticlines
- folds plunge towards the same direction2mks
   Thrust fold
- Has asymmetrical anticline
- Its axial plane is almost horizontal
- One limb lies on the other
- Rocks are fractured along the thrust plane

b) With the aid of well labelled diagram, describe how a tilt block is formed by compression forces.
- Layers of rocks are subjected to compressional forces
- Lines of weakness develop leading to the formation of reverse faults
- Continued CF results in the middle block of land being uplifted
- Due to greater CF on one side of he middle block, the block is raised more on one side than the other. -   The resultant landform that is raised and tilted is a tilt block.
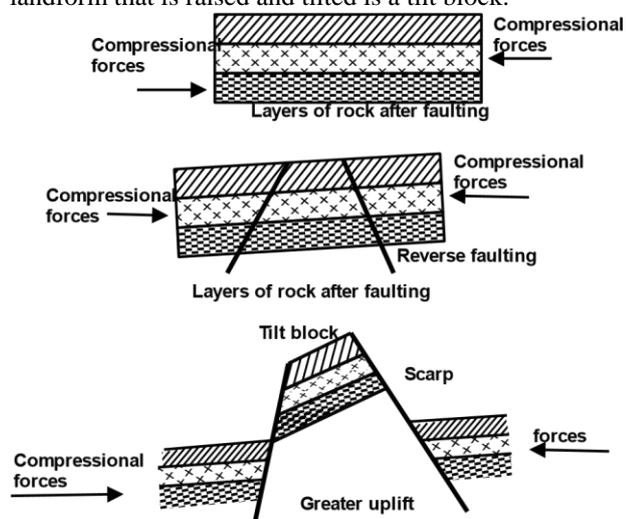
Text 5 mks

Diagram- 3mks c) Explain three effects of faulting on human activities in Kenya   6mks
- Faulting/fault scarps make it difficult to construct roads/railways e.g mai mahiu, Kerio valley.
- Depression in the Rift valley contain water that forms lakes which provide water for domestic/ fishing/industrial use.

- Faulting exposes minerals such as diatomite, trona fluorspar which are easily exploited.
- Step faulting makes rivers to have water falls, rapid which are harnessed for H.E.P
- The scarp slopes/steep slopes of tends to discourage settlement as in the slopes of Gregory rift valley.
- Features of faulting such as rift valley attract tourists
- Some springs formed at the foot of escarpments forms sources of river water used for domestic purposes. d) Students are planning to carry out a field study of an area affected by faulting
i) State two reasons why it is important for the students to have reconnaissance of the area 2mks
- To enable them draw up study objectives/hypothesis
- To enable them draw a route map
- To enable them prepare a work schedule
- To enable hem identify/sort out relevant
  Tools/equipment for study
- To identify suitable methods of data collection
- To seek permission from the occupants of the site of study - To enable them prepare financial requirements.
ii) One of the ways they would use to collect
  data is through direct observation.
  Give two disadvantages of direct observation in the study of such an area.2mks -
  It is expensive
- It is time consuming
- It is tiresome
- It is limited only to direct sources/primary sources
- It is only suitable to the sighted people

8. i) What is the difference between weathering and mass wasting?   2mks
- Mass wasting-down slope movement of the weathered material by the aid of gravity while weathering is breakdown (physical, biological, chemical of rocks on the surface of the earth insil/without movement.
ii) A part from plants, give three other factors that influence the rate of weathering   3mks
- Water
- Heat /temperature
- Chemicals/dissolved substances
iii) Explain two ways in which plants cause weathering   3mks
- Plants roots e.g trees grows into joint and cracks as they grow causing rock blocks to disintegrated.
- Plants like algae, mosses and lichen retain water on rocks resulting to chemical weathering processes.
- Decaying plant materials produce organic acids, that reacts with some of the rocks minerals causing it to decay.
b) i) List two types of slow mass wasting other than soil creeps   2mks
- Talus creep/scree creep
- Solifuction
  iii) Explain three factors that causes soil creep
- Heating and cooling of soil
- Freezing and thawing of soil
- Ploughing down hill
- Shaking by earth quakes/Heavy tracks
- Alternate drying and wetting of the soil
- Trampling and burrowing of the ground by animals.
c) Explain four effects of mass wasting on the environment 8mks
- Leads to loss of fertile soil
- Leads to loss of life
- It may block the river of stream
- leads to displacement of people
- It may lead to destruction of infrastructure and buildings/loss of property
- It may lead to formation of lakes
9.(a) i) State three physical characteristics of karst landscape region   3mks
- Lacks surface drainage
- Has numerous underground streams
- Consists of outcrops of bare rugged rocks/rocky - Has several deep steep-sided dry valley/depression.
- Has several hills
- Has little vegetation cover
- has thin soil

ii) A part from uvala name four other landform surface features found in a karst landscape region. 4mks -
Grikes
- Clints
- Dolines
- Polje
- Sinkhole/swallow holes
- Dry valley/blind valley/limestone gorges   iii) Describe how a uvala is formed in karst landscape regions4mks
- Rain water containing weak carbonic acid percolates through the cracks/joints in limestone rocks.
- The water dissolves the rocks along the joints
- Several joints eventually merges to form dolines adjacent to each other
- The dolines finally join to form a large depression
  (due to continued solution)
- The resultant large depression with irregular floor is called a uvala.

b(i) Differentiate a spring from an artesian well   2mks
- A spring is a point/place where underground water flow out naturally out of the ground onto the land surface, while an artesian well is a hole sunk into the ground below the water table/into the aquifer of an artesian basin from where water flows out due to hydraulic pressure.

ii) State four conditions necessary for the formation of an artesian well   4mks
- A quiver must lie between two impermeable rock layers (so that it can retain water).
- One/both ends of the aquifer must be exposed (to allow water to percolate).
- The aquifer must be synclined (to ensure that the water has sufficient pressure to flow out naturally)
- The aquifer must outcrop in a region with adequate water supply
- The mouth of the well must be lower than the intake area

c) Explain four ways by which underground water influences human activities   8mks
- Hot springs/geysers are major tourist attractions
- Hot springs may cause deposition of minerals on the surface which are easily exploited commercially.
- Hot springs/geysers can be harnessed to produce geothermal power for industrial/domestic use.
- Springs/wells/oases provide water for agricultural/domestic use
- Hot springs have medicinal value due to sulphur emitted

10. (a)
i)   What is soil catena?
- Soil catena is the sequence of different soils from the same parent rock on a slope.   2mks ii) Draw a
labelled diagram to show a well developed soil profile.
        (5mks)
        A SOIL PROFILE
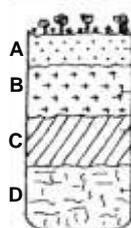
iii) State three characteristics of soil found in the arid regions of Kenya
- The soil are light in colour
- the are saline
- They are sandy/stony
- they are loose in texture
- They are thin
- They have low moisture content   3x1=3mks b) Give four factors that determine the colour of soil.
- The type of parent rock
- The amount of organic matter/humus
- The chemical composition/the degree of concentration of iron oxides/minerals
- The amount of water in the soil/the drainage of the soil   4mks c) Describe how laterization occurs
- During the wet season, mineral salts in the top layer of the soil dissolve in rain water.
- The dissolved minerals percolate/steep downwards from the top soil to the sub-soil (silica and based).

- The dissolved minerals move/are deposited further downwards to lower layer
- Insoluble mineral such as iron and aluminium accumulate on the top layer to form a crust of laterites.   6mks d) Explain how the following farming practices causes soil erosion
i)   Burning
- Burning destroys micro-organisms which are essential for the formation of humus which binds soil particles together - Burning destroys vegetable matter that protects the soil against erosion/form humus hence less protection.
- Burning destroys the nitrogen fixing bacteria making the soil less fertile and therefore few plants and less protection of the soil.
- Burning loosens the soil making it susceptible to erosion/leaching which drains away soluble minerals nutrients 2mks ii) Continuous application of fertilizer on farm lands
- This increase the acidity of the soil/changes the PH of the soil. The acidity destroys the micro-organism in the soil/fungi/bacteria which could have helped in the formation of humus which binds soil particles.
- Acidic soils are unsuitable for a variety of crops which would protect the soil from erosion. 2mks iii) Monoculture
- Monoculture leads to exhaustion of certain minerals from the soil making it infertile and bare leading to its erosion.
- Monoculture leads to loosening of soil particles thereby encouraging soil erosion   1x2=2mks

KISII CENTRAL DISTRICT MOCK
Kenya Certificate of Secondary Education
GEOGRAPHY
Paper - 312/2
July/August- 2015
MARKING SCHEME SECTION
A- 25 MARKS ONLY
1   **a) Define Domestic Tourism.**
- Refers to visits within a country by residents of that country for recreational purposes.
- Refers to tourism which involves residents of one country only travelling only within that country for recreational purposes.
             1 x 2 = 2 marks)
    b)State three physical factors which have influenced the development of the tourist industry in Switzerland.
- The central location of Switzerland in Europe.
- The glaciated lakes with clean and blue water on the Swiss Plateau.
- The abundance of spas/mineral springs on the Swiss Alps.
- The spectacular landforms from glaciations in the highlands and lowlands.
- The abundance of snow on mountain slopes in winter.
- The warm sunny days in summer/The Mediterranean Climate. 3 x 1 = 3 marks)
2   **a) Name two leading softwood trees growing provinces in Canada.**
- British Columbia. -   Quebec.
- Ontario
- Newfoundland
- New Brunswick
- Nova Scotia   2 x 1 = 2 marks)
    b) Identify two climatic conditions which hinder softwood forests exploitation in Canada.
- The cold climatic conditions which delays softwood trees growth up to maturity prior to harvesting.
- In winter the ground is absolutely covered by snow/frozen making forest areas inaccessible for exploitation to take place. - The cold conditions cause discomfort to the lumberjacks thus affecting forest exploitation.2 x 1 = 2marks) **3.**
    (a) Give two characteristics of derelict land in connection with commercial mining.
- Has limited / nil vegetation cover.
- Has many open holes/pits/depressions.
- Has pools of stagnant water.
- Has huge heaps of soil/rock waste/slag/dumps.   2 x 1 = 2 marks)
b) State two ways by which derelict land canbe rehabilitated -
    Through law enforcement on the rehabilitation of derelict land.
- Filling in all depressions with soil and rock waste.
- Fill the depressions with water for the enhancement of water sports.
- Planting trees to stabilize and beautify the landscape.

- Aqua cultural farming to be enhanced/fish farming/crocodile farming.   2 x 1 = 2marks) **4   a) Name the methods of commercial fishinglabelled FA and FB.**
- FA - Purse Seining fishing method.
- FB - Trawling fishing method. (2 x 1 = 2 marks)

   b) Describe basket fishing as a method of fishing in Kenya.
- A woven basket with a narrow cone-shaped opening is used.
- A bait is placed inside the basket.
- The basket is placed at the bottom, of the shallow point of a lake or river bank.
- Fish are attracted by the bait and thus swim into the basket to feed on it.
- Once in the basket fish are trapped/deterred from swimming outwards into the water body.
- The basket filled with fish is manually removed from the water body/river bank.
- Fish in the basket are removed manually for processing to start. (3 x 1 = 3 marks)   **5   a) Name of the following.**
  i)   The lake labelled LK   -Lake Huron (1 x 1 = 1mark) **ii) The waterfalls labelled WF.**   - The Niagara Falls (1 x 1 = 1mark) **iii) The canal labelled CL.**
- The New York State Barge Canal/The State Barge Canal. (1 x 1 =1mark)

   b)State three benefits of the St. Lawrence Seaway to the Government of Canada and the United States of America. - Increased the volume of trade between North America and European Markets.
- Development of many urban centres along the Seaway.
- Availed fresh water from the Lakes and the St. Lawrence River for domestic and industrial use.
- Has boosted international relationships/understanding.
- Many employment opportunities have been created in the transport and industrial sectors along the seaway.
- Rapid industrial development has taken place in the region.
- Many recreational features have been developed along the seaway.
- Substantial revenue and income is collected by Canada and The United States from the economic activities along the seaway.
- Hydro electric power is obtained from the waterfalls/Reservoirs along the seaway for domestic and industrial use.
- Reduced cost of transportation has been realized by using the Canals, Lakes, the St. Lawrence River and the Atlantic Ocean.
        (3 x 1 = 3marks)
   SECTION B - 75MARKS ONLY
6a) i) Name the method of statistical data presentation shown above.
- Comparative/Multiple /Group Line Graph. (1 x 1 = 1mark)   **ii) Describe the trend of Tea production in Kenya between the year 1999 and 2004.**
- At Kshs. 15,000 million Tea Production between 1999 and 2000 was the same in value.
- Between the year 2000 and 2003 the value of Tea produced increased by Kshs. 3,000 million/gradually by Kshs. 3,000 million.
- Between the year 2003 and 2004 the value of tea produced dropped gradually by ksh. 1,000 million.
- Throughout the six year period the value of Tea produced in Kenya surpassed/beat all other crops/was the highest ranging between Kshs. 15,000 million and Kshs. 18,000 million. (3 x 1 = 3marks)
iii) Identify one mistake with the title of this method of statistical data presentation.
- The period during which the production of the cash crops took place ie. from 1999 to 2004 has not been indicated at all.
        (1 x 1 = 1mark)

iv) State two disadvantage of using this method to present statistical data.
- Where lines cross one another comparison and interpretation becomes difficult.
- Comparative Line Graphs can be used to show only a limited number of variables to avoid crowding.
- It consumes a lot of time to plot many comparative line graphs. (2 x 1 = 2mks)
b) State five physical factors which favour large scale maize cultivation in Trans Nzoia County.
- The gently sloping highland landscape.
- The deep and well drained volcanic/loamy soil.
- The altitude which ranges between 1000m and 1900m above sea level.
- The high rainfall which ranges between 1000mm and 15000mm per annum.
- The mean annual temperature which ranges between 10°c and 27°c.
- The absence of frost throughout the growing period.
- The dry period which facilitates the ripening and drying of the seeds. (5 x 1 = 5marks) **c) Give three uses of maize as a crop.** - Maize grains are used as food.
- Maize stalks are used to product silage.
- Maize grains are used to produce salad oil for cooking.
- Maize grains are used to produce industrial alcohol.
- Maize flour is used to produce alcohol brews.

- Maize stalks/leaves provide good farm manure.
- Maize cobs and stalks are used to produce energy/fuel for cooking and keeping houses warm.
- Maize grains are used to manufacture starch. (3 x 1 = 3 marks)

d) Explain five problems facing commercial maize cultivation in the Rift valley Region of Kenya.
- Attack of maize by diseases such as white lead, blight and lethal necrosis which kills the crop and affects growth leading to low production.
- Attack of maize by pests such as stalk-borers, army worms, aphids, birds and weevils which damage the crop or kill it completely leading to high losses.
- Low payments which demoralizes the farmers.
- The high cost of farm inputs which discourages the farmers/hampers maize production.
- The muddy roads during the rainy season which hampers maize transportation from the farms and to the market destinations.
- The very high rainfall which causes maize to rot and die while in the farm/develop stunted growth.
- The occurrence of drought which destroys large tracts of the maize crop/causes retarded growth leading to low production.
- Frost attack which destroys maize completely thus affecting the quantity of yields produced.
- Hailstones pounding the maize plant damages it completely or partially which leads to reduced yields or no production at all.
            (5 x 2 = 10marks)

7a) Define International Trade.
- This is trade which is carried out between two or more countries.
- The exchange of goods and services between individuals and governments of different countries. (1 x 2 = 2marks) **b) State five factors which influence the development of international trade. -**   The large and ready supply of goods.
- The high and reliable demand for goods/market for goods and services.
- The prevailing efficient transport systems/roads/railways.
- The efficient communication systems which are in place.
- The presence of a common currency/convertible currencies.
- The peaceful political understanding among and between Nations of the world.
- The absence of trade restrictions/the limited trade restrictions.
- The existence of strong trading blocs.
- The existence of efficient aidsof trade/Banks/Insurance/Warehouses. (5 x 1 = 5marks) **c) Explain five ways in which Kenya is negatively affected by International trade.**
- By being over dependent on agricultural produces, whose prices fluctuates quite often Kenya gets demoralized a lot.
- Import goods become a great threat to the local-infant industries leading to their total closure e.g the textile industries.
- Importation of outdated/expired good/sub-standard goods cause adverse effects/harm on the citizens.
- By depending largely on the developed European countries for her imports and exports Kenya is forced to accept a number of undesirable gestures.
- To satisfy the demands of external market, Kenya is compelled to over-exploit her natural resources which rapidly leads to their decline/depletion in the long run. (5 x 2 = 10marks)

d) State two economic roles played by the European Union as a trading bloc.
- Elimination of all tariffs and duties among the Member States.
- Promotion of cooperation with African, Caribbean and Pacific Countries for purposes of promoting market horizons.
- The development of transport modes among Members States.
- Providing funds for investment in industry and energy sectors.
- Providing loans and grants to reduce poverty among certain Member States.
- Introduction of a common currency called the Euro to harmonize economic activities.
- Stabilization of prices of goods among the Member States. (2 x 1 = 2marks)

e) Suggest three ways by which Kenya can greatly reduce her unfavourable balance of trade.
- By value addition of locally produced goods to stand a good chance of earning high foreign exchange from her exports.
- By broadening the search for more external markets where large volumes of locally produced goods will be sold to earn more foreign exchange.
- By diversifying the export goods so as to earn high foreign exchange especially in the process of price fluctuations.
- To establish more industries through provision of special incentives in order to produce more goods for export markets.
            (3 x 2 = 6 marks)

8   a) Differentiate the following population terms i)
    Distribution from density
- Population distribution is the spread of people across an area while population density refers to the number of people occupying a particular unit area. (1 x 2 = 2 marks)

ii) Fertility from fecundity.
- Fertility is the ability to conceive or produce children while fecundity is the ability to give birth to many children.
            (1 x 2 = 2 marks)

b) Explain five causes of Kenya's rapid population growth rate.
- The high fertility rate due to improved standards of nutrition and health services. -   The declining death rate due to improved health care and diet/nutrition.
- The preference of boys to girls by certain communities to guarantee the continuity of a family's status/influence/security. -   Early marriages which gives a long time to give birth to many children in a lifetime.
- Improved health services/medical facilities which has reduced diseases/infant mortality rates.
- Improved and abundant nutrition which has led to high fertility rates.
- The denunciation of birth control by certain Churches which leads to many children. (5 x 2 = 10 marks) **c) Give five ways by which Kenya's rapid population growth rate can be reduced.** -   By making girl-child education mandatory in all communities.
- By asking couples to practice family planning.
- By campaigning on the significance of small families.
- By providing special incentives to families which give birth to few children.
- By encouraging couples to use contraceptives.
- By encouraging the formation of non-governmental organizations to address high population growth rate.
- By discouraging early marriages and polygamy in various communities. (5 x 1 = 5 marks)

d) State three ways in which the population structure of Kenya differs from that one of Sweden.

Kenya's population
Has a high composition of children.

Has a high proportion of dependants.

Has low ageing population.

Has low life expectancy.

Sweden's population
- Has a low composition of children.

- Has a low proportion of dependants.

- Has a high ageing population.

- Has high life expectancy.

(3 x 1 = 3 marks)

e) State three ways in which high population density has physically affected the Kenya Highlands.
- Water catchment areas have been damaged by settlement establishment and agricultural activities.
- Wetlands have been cultivated thus damaging them totally.
- Over cultivation of soil has led to its rapid degeneration.
- Settlement and agricultural activities on steep slopes has led to the development of landslides.
- Massive deforestation has paved way towards irregular rainfall patterns/development of destructive winds/climate change. -   The pollution of rivers/water bodies has developed due to over cultivation of soil and deforestation. (3 x 1 = 3 marks) **9a) i) Name and give the main function which led to the growth of the urban centre labelled.**

A	Eldoret	An agricultural Collection Centre
B	Kisumu	A Lake Port
C	Thika	An Industrial Town
D	Mombasa	A port

(4 x 1 = 4marks) **ii) Explain five factors which favoured the growth of the urban centre labelled T.**
- The strategic location on the East Coast of Africa making it a significant port of call to Asian and European countries.
- The relatively flat landscape which facilitated the construction of buildings.
- The large supply of water from Rivers Mwachi, Kombeni and Mzima Springs for domestic and industrial use.
- The large and rich hinterland from which large quantities of goods are obtained from for export to other countries thus the need for a port.
- The good railway and road connection to the interior which facilitated the transportation of goods and passengers.
- The deep water of Kilindini Creek which provides space to accommodate large ships.
- The sheltered natural harbour which makes water vessels to stay calm while the loading/uploading of goods is underway.

- The Moi International Airport which connects Mombasa to the outside world especially tourists who travel for recreation purposes. (5 x 2 = 10 marks)

ii) Give two social functions of the urban centre labelled B.
- Educational centre.
- Religious centre.
- Communication centre.
- Recreational/Entertainment centre. (2 x 1 = 2marks)

b) State five social problems facing the City of Nairobi.
- The high degree of unemployment.
- The limited housing facilities.
- The limited social amenities.
- The large number of street children/families.
- The high rate of crime.
- The decay of moral standards.
- The abuse of drugs and substances. (5 x 1 = 5 marks)

c) Give four measures which are put in place to reduce transport problems facing the City of Nairobi. -
By constructing by-passes.
- By broadening the prevailing roads.
- By placing more road signs along the roads to guide motorists and pedestrians.
- By paving and marking pedestrian walks.
- By laying down fly-over's.
- By deploying more officers to enforce traffic rules.
- By punishing severely those who violate traffic rules.
- By regularly repairing the roads to be in good condition.
- By reducing the number of roundabouts.
- By discouraging the 14 seater matatu and encouraging the use of buses with regard to public transport. -   By relocating bus stages from the Central Business District.
- By erecting more bumps on the roads.
- By increasing traffic lights and encouraging pedestrians to use zebra crossings.
- By improving the railway transport and encouraging people to use it. (4 x 1 = 4marks)

10a) Name the following;
i)   The river labelled P and R.
- **P-** River Lippe
- **R-** River Wupper (2 x 1 = 2 marks**) ii) The Canals labelled CA and CB.**
- **CA**- The Lippeseite Canal.
- **CB-** The Rhein - Herne Canal (2 x 1 = 2 marks)

iii) The Town labelled TO and TB.
- **TO -** Duisburg
- **TB -** Dortmund (2 x 1 = 2 marks)

B (i)Explain five human factors which led to the development of the Iron and steel industries in the Ruhr Region of Germany.
- The large and ready market in the Ruhr Region, European Countries, African countries, South America and Asia which boosted the morale of companies, families and the government of Germany to invest in the Iron and Steel Industry.
- The construction of many canals such as the Dortmund-Ems Canal, the Rhein-Herne Canal and the Lippeseitte Canal which facilitated the transportation of raw materials and finished products into and out of the region.
- The large skilled labour force in the region which provided the needed expertise in metal working.
- The large capital for investment in the Iron and Steel Industry from the Friedrich Krupp family/Friedrich Alfred - Krupp Family and the Ruhr Khole Family which enabled it to take off strongly.
- The large supply of electricity obtained in the region which was used to drive the machines to produce iron and steel. (5 x 2 = 10 marks)

ii) Apart from the Iron and Steel industry, name three other manufacturing industries located within the Ruhr region of Germany.
- Oil refining industries.
- Pharmaceutical industries.
- Textile industries.
- Food processing industries.
- Chemical industries.
- Machinery making industries. (3 x 1 = 3 marks)

c) (i) Give two reasons why the students drafter objectives for the study.
- To facilitate the collection of relevant data during the study.
- To save on the time spent during the study.
- To be able to assess the success of the field study.
- To be able to determine the type of equipment needed for the study.   **ii) Identify two follow-up activities the students carried out after the actual visit to the field.** -   Held discussions of field findings.
- Made summary notes.
- Drew a map of the area covered during the study.
- Submitted group reports through the selected leaders.
- Asked and answered questions for clarification on the study. (2 x 1 = 2 marks)

d) State two problems facing the development of Jua Kali Industries in Rural Areas of Kenya.
- The limited capital for investment.
- The limited/low market for the finished products.
- The limited supply of electricity for production operations.
- The low standards of goods due to low production technology.
- The less elaborate marketing strategies for the finished products/exploitation middlemen to be in operation. -   The high rates/taxes to be paid. (2 x 1 = 2 marks)

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PAPER 1

a)   Study the world map below answer the questions that follow:

      Name the fold mountain found in the area marked A, B and C.   3mks
b)   Give two negative effects of faulting.   2mks
GEOGRAPHY

1.

2.   a) Name three transitional zones of the atmosphere.   3mks b) Give three reasons why cloud concentration is higher in the troposphere.   3mks
3.   The table be3low represent temperature and rainfall for two stations X and . Study them and answer the questions that follow.
                STATION X

Month	J	F	M	A	M	J	J	A	S	O	N	D

Temp⁰C	27	27	27	26	25	25	25	26	27	27	26	26
Rainfall mm	65	85	150	250	225	125	75	75	75	112	125	125

STATION Y

Month	J	F	M	A	M	J	J	A	S	O	N	D
Temp⁰c	27	28	27	27	26	24	23	23	24	24	26	27
Rainfall mm	68	81	142	286	187	28	28	28	36	55	68	78

a) i)Calculate the annual range of temperatures for station x and Y.   2mks

   ii)Calculate the annual rainfall for station.   1mks

   b)Describe the characteristics of rainfall for station X.   2mks
4. a) What is an avalanche?   2mks   b) Identify three factors that influence the rate at which materials move down a slope. 3mks
5. The figure below shows a feature formed in a glaciated landscape. Use it to answer the questions that follow.

Diagram
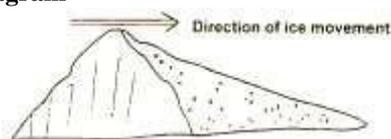
a) Identify the feature.   1mks
b) Describe how the above feature is formed.   4mks

SECTION B:
6. Study the map of Karatina sheet 121/3 provided and answer the questions that follow.
a) i) Give the magnetic variation of the area shown on the map.   1mks   ii)
Give two methods used in the map tract to represent relief.   2mks
iii) What is the six figure reference of the air photo principle point (21() in the North west part of the area covered by the   map. 2mks
iv) What is the bearing of the water reservoir near Kiamucheru grid square 9054 from the junction where road D451 and E1706 meet grid reference 860554.   3mks b)
Describe the drainage of the area covered by the map.   4mks
c) Draw a square measuring 7cm by 7cm to trepresent the area enclosed by eastings 81-88 and Northings 45-52.
                                                                                          2mks

On your square mark and name the following:
-A forest   1mk
-A power   1mk
- River Sagana   1mk
d) Citing evidence from the map, explain two factors that have attracted high settlement in the area covered by the extract.
                                                                                          4mks
e) Students from a school near Mt. Kenya forest are planning to carry out a field study in the area covered in the map.
i) Name two types of field work they may consider carrying out.   2mks ii)
What factors are likely to disrupt the working schedule.   3mks
7. The diagram below shows some surface features in a karst region. Use it to answer question (a)
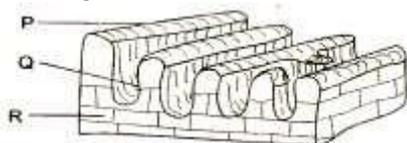
a) Name the features marked P, Q and R.   3mks
b) Outline three factors that influence the development of karst scenery.   3mks
c) Using suitable diagrams, describe how the following features which are found in limestone areas are formed.
   i) A shallow hole
       5mks ii) A doline
       5mks d) Explain three ways in which limestone landscapes influence human activities.
       6mks
e) Form four students of your school undertook field work on a karst landscape.
   i) State two objectives of their study.
          2mks

ii) Give one reason why they need to pre-visit the area. 1mk

8. .a) i) what is soil catena? 2mks ii) Draw a well labeled diagram to show a well- developed soil profile. 5mks iii)State three characteristics of the soil found in the arid region of Kenya. 3mks b) Give three factors that determine soil colour. 3mks

c) Describe how laterization occurs. 6mks

d) Explain how the following farming practices affect soil.

i) Burning 2mks ii) Continuous application of fertilizer on farm lands. 2mks iii) Monoculture. 2mks

9. a) i) Outline two factors that influence the development of drainage pattern. 2mks ii) Give three features of a river in its old stage. 3mks

b) Briefly describe how the following factors influence river erosion.

i) Gradient and velocity. 2mks ii) Nature and amount of the load. 2mks iii)Nature of bedrock 2mks

b) The diagram below represents features of a river. Study it and answer the questions below.
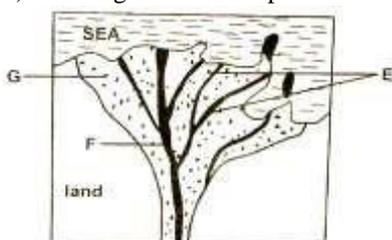
i) Name the parts labeled E, F and G in the diagram. 3mks ii) Give one type of the feature represented by the diagram. 1mks iii)State three conditions necessary for the following of the features shown in the diagram. 3mks d) Apart from providing water for domestic and industrial uses, highlight three other benefits of rivers in Kenya.3mks

e) Your class intends to conduct a field study on river deposition around your school.

i) Name one stage along the profile of a river where your study conducted. 1mk ii) State two methods you would like to collect data during the study. 2mks iii) Give one benefit of river deposition that you intend to verify during the study. 1mk 10. a)Differentiate between magnitude and intensity of an earthquake. 2mks b) i)List down three major earthquake zones of the world. 3mks

ii) Identify four natural causes of earthquake. 4mk
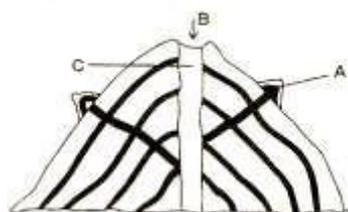
c) The diagram below represents the features produced by vulcanicity. Use it to answer the following questions.

i)Identify the features A, B and C . 3mks ii) Describe how the above feature is formed. 5mks

d) You are to carry out a field study on vulcanicity around your school.

i) Identify three extrusive landforms you are likely to identify. 3mks ii) State three methods you would use to collect the data. 3mks iii) State two ways in which you would prepare for field study. 2mks **THARAKA SOUTH**

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GEOGRAPHY PAPER 2

SECTION A

1. a) Define the term zoning. 2mks b) Identify three main zones of an ideal urban center. 3mks
2. a)What is placer mining? 2mks b) Differentiate between a vein and a lode. 2mks

3. a) Differentiate between andromous fishing and crustacean fishing.   2mks b)
    Name the commercial fish species caught along the coast of East Africa.   3mks
4. a) What is a cottage industry?   2mks b)
    Give four reasons why the government of Kenya encourages the establishment of Jua Kali industries.   4mks
5. .a)Use the map of Kenya below to answer question (a)

    i) Name the national park   marked X.
    1MK   ii) The game reserve marked Y.
    1mk   iii) The marine reserve marked Z.   1mk
    c) Apart from establishing national parks and game reserves, state two other ways through which the government of Kenya
       conserves wildlife.   2mks
            SECTION B
6.The data below represents sugarcane production in five major factories in Kenya.   Use it to answer the following question.

FACTORY	PRODUCTION IN „000 TONES
Sony	50
Nzoia	100
Chemelil	200
Muhoroni	250
Mumias	400

    a) i) Using the data above, draw a divided rectangle 15cm length.   7mks
ii) Give the difference ion tonnage produced by Muhoroni and Nzoia companies.   1mk
iii) List two advantages of representing data using a divided rectangle.   2mks b) Explain
    four physical conditions required for the growth of sugarcane successfully in Kenya.   8mks
  c) i)State three uses of sugar.   3mks   ii)State four benefits of sugarcane growing to the Kenyan economy.   4mks
7. a) List two levels of domestic trade.
            2mks   b) Define balance of payment .
            2mks
  c) i)List three main imports to Kenya.   3mks   ii)
List five problems facing trade in Kenya.   5mks   d) Explain
four reasons why trade amongst Africa countries is not well developed.   8mks
  e) State five benefits that a country enjoys by being a member of a trading bloc.   5mks
8. a)   i)Define eco -tourism.
            1mk
    ii) Name two Game reserves found in the Rift Valley of Kenya.   2mks   iii)
Give the differences between National parks and Game Reserves.   4mks b) i) State
three factors that hinder domestic tourism in Kenya.   3mks   ii) Give two
negative effects of tourism in Kenya.   2mks c) i) Give two
differences between tourist attractions in Kenya and those of Switzerland.   2mks   ii) Give two reasons
why domestic tourism is encouraged in Kenya.   2mks   iii) Explain three physical
factors favouring tourism in Switzerland.   6mks

iv) State three reasons why the government of Kenya encourages foreign tourists. 3mks

9. .a) i)Differentiate between indigenous and exotic forests. 2mks

ii) The map below shows Kenya's forest Zones. Study and use it to answer the questions that follow.
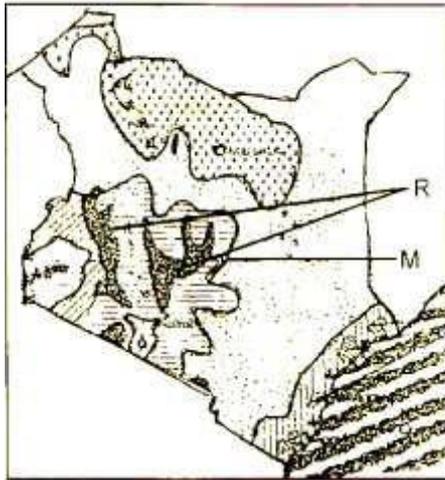
Identify forests marked M and R. 2MKS

iii)State three factors that lead to depletion of forests in Kenya. 3mks

b) Explain three factors that favour the growth of natural forests on the slopes of Mt. Kenya.6mks

c) Compare forestry in Kenya and Canada under the following subheadings:

i)Distribution of forests. 2mks ii)Mode of exploitation 2mks iii) Transport. 2mks d) i) State three factors favouring the development of softwood forests in Canada. 3mks ii) Give three measures used to conserve forests in Kenya. 3mks 10. a) i)Name three main modes of transport in Kenya. 3mks ii) Give three ways in which cell phones contribute to Kenya's economic development. 2mks iii) State two problems facing communication in Kenya. 2mks b) Explain four advantages of rail transport over road transport. 8mks c) Use the map of Africa to answer the following questions.
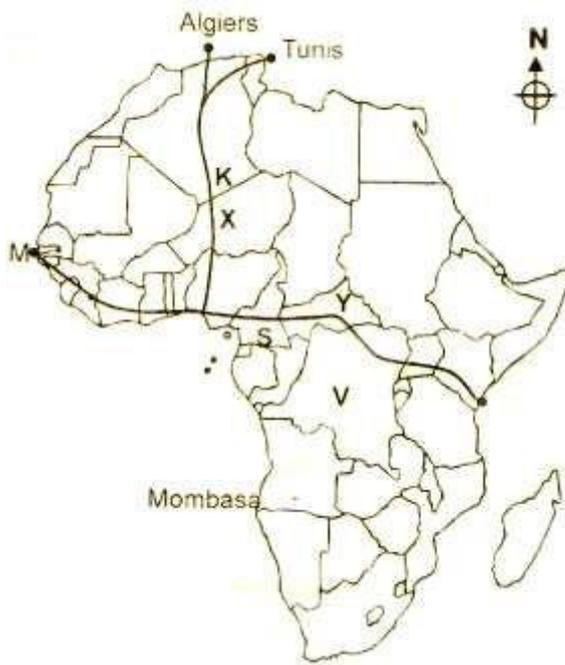
i)Name the highway marked X and Y. 2mks

ii) Name the town marked M. 1mk

iii) Name the country marked V. 1mk

d) i) Give two reasons why it is difficult to transport goods from Mombasa to Lagos by road.   2mks

   ii) State four efforts that have been made to improve transport in Africa.   4mks

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GEOGRAPHY PAPER 1
SECTION A
MARKING SCHEME

1. a)Fold mountains found A-
   Appalachian mountain
   B- Rockies
   C- Ural mountain
   b)Two negative effects of faulting
- Land is disjointed leading to disruption lines water , sewage and oil pipes.
- It leads to sinking of land hence loss of life, property and instruction of agriculture land.
- When faults occur across a river, the river may disappear completely or change its direction of flow.
- Block Mountains reverse drainage.
2.   a)Two transitional zones of the atmosphere (3mks)
- Tropopause
- Stratopause
- Mesopause
       b) Three reasons why cloud concentration is higher in the tropopause.   3mks
- Temperature decrease with increase in height
- Presence of particles in the layer like dust act as condensation in nuclei.
- Has high humidity /water vapour.
3.   i) Annual range of temperature for the station X and Y
       X; 27^0-25^0 =2^0 C   1X1=1MK
Y; 28^0-23^0 =5^0C   1x1=1mk   ii)
The annual rainfall of station Y.
  68 + 81 + 142 + 286 + 187 + 28 + 28 + 28 +36 + 55 + 68 +78 =1085mm 1x1mk b)Characteristics
of rainfall for station X - Double maxima rainfall region.
- Station experience high rainfall
- Rainfall throughout the year.   2x1=2mks
4.   a) Avalanche: Sudden /rapid falling of a mass of snow , ice and detached rock materials down the slope.   2x1=2mks
b)-Angle /gradient of the slope.
- Climate /rainfall /temperature
- Vegetation cover
- Tectonic forces/endogenic forces
- Human activities   any 3x1=3mks
5.   a) Craig and tail ✓1
       b)-formed when a resistant block stands out on the direction of the glacier.✓1
- Resistant side is ended to form the crag.✓1
- Deposition occurs on the opposite side to form the tail.✓1
- The tail is composed of rock materials of various sizes.✓1   4x1=4mks
       SECTION B
6.   a)   i) 01^009" ✓1
               ii)-Contours✓1
                -Trigonometrical stations✓1
iii)816653✓✓2
               iv)$099^0$1✓2
       b) Area has permanent rivers eg R. Sagana
- Area has numerous water reservoir eg around grid 8946.
- There is a papyrus swamp around grid 0145.
- Most rivers form dendritic drainage pattern.
- Numerous dams in the area eg grid 8651.   Any 4x1=4mks c)   ON THE GRAPH
       d) Employment –Dense settlement around major towns eg Kitale town.
               -Transport line: Evidence by settlement around grid 8453.
                       (Any other : evidence must be stated to score.)   any
2x2=4mks   e)   i)-Field excursion ✓1   -Field study✓1
               ii)-Sickness during the study

- Dense vegetation cover may hinder penetration. - Heavy rainfall during the study.

- Attack by wild animals.
- Steep slopes may be difficult to climb.   5x1=5mks
7.   a) P- Limestone
                Q-Grike
                R-Clint
        b) Three factors influencing development of karst scenery.
- The surface rock and the underlying rock should be thick limestone, dolomite or chalk.
- The rock should be hard and well jointed.
- The climate should be hot and humid.
- The water table should be deep below the surface.   c)   Formation of
        i) Swallow hole   5mks
- Is a vertical hole in the ground through which the rain water or river water disappears into the ground.
- The water widens and deepens the joints to form the vertical hole, as the water sinks through them.
- The water that has disappeared through the hole moves along the rock joints until it comes out of the ground as a veliclusion spring downhill.
- When the surface run-off or river water disappears into this hole, it is then called a swallow hole or a sink hole.
        ii)   A doline   5mks
- Is a round or elliptical hollow on the surface of a limestone region, formed when several small hollows merge.
- The small hollows are formed when water starts acting on the points of convergence of joints on the surface.
- These points of convergence are widened as the solution process continues until the blocks of rock between the hollows are completely dissolved.
- This leaves a continuous rounded or elliptical depression called a doline.   d) Influence of limestone landscape on human activities.
- Surface and underground features in a karst scenery can attract tourists thereby earning foreign exchange.
- Limestone Landscapes are usually rugged with rocky surfaces, thin soils poor vegetation and inadequate surface water, all of which discourage settlement.
- Limestone is also a raw material for cement manufacturing, therefore it supports the construction and manufacturing industries.
        e)i) Objectives of the study
- To find out the features formed in karst landscape.
- To identify the different features within the landscape.
- To establish the economic importance of features in karst scenery.
- To find out the effects of water action in limestone areas on settlement.
                        Any other relevant point(2x2=2mks)
        ii)Reasons why they needed to pre-visit the
area.1mk -   To estimate the time needed to do the
study .
- To estimate the cost of the study.
- To enable them foresee the possiblew problems to be encountered while in the field. -   To decide on the tools and materials to carry -   To obtain permission from relevant authorities.
8.   a)i) Soil catena
        Soil catena is arrangement of soil on a mountain slope from top to the bottom.   2x1=2mks
ii)
        iii)-Course
textured -   Low
humus content
- Highly porous
- Highly permeable   any other relevant point 3x1=3mks b) Humus content
- Chemical concentration /composition. - Drainage
c)
- operates in humid regions mainly in equatorial and tropical climate.
- Weathered materials are removed in solution from horizon A to horizon B.
- Silica is leached from soil while oxides accumulates resulting in hardening of the top layer.3x2=6mks d) i)Burning
- Destroys vegetation cover thus exposing soil to agents of erosion.✓✓   2X1=2mks ii) Continuous application of fertilizer on farm lands.

- Interferes with soil Ph/makes the soil more acidic or basic.
- This affects the activities of micro-organism.

iii) Monoculture.
- Exhausts certain minerals within the soil, thus making it infertile.✓✓   2x1=2mks

9.   a)i)two factors that influence the development of drainage
patterns.2mks -   Direction of the slope of the land.
- Difference in the slope of the land
- The arrangement of rock layers /rock structure -   Faulting /fault guided.   ii) Three features of a river in its old stage.
- Pronounced meanders
- Braided channels/river braids
- Ox-bow lake
- Estuaries
- Flood plains
- Natural levees
- Distributaries /deltas
- Slip –off –slope
- Bluffs
- Slagoons/lagoonal lakes -   Deferred tributaries.
         b) How the following influence river erosion
         i)   Gradient and velocity
         The steeper the slope, the higher the velocity and the more the rate of erosion and vice
versa.✓✓   ii) Nature and amount of the load.
   A river carrying a large load and flowing at a high speed will be more effective in erosion work than a river carrying a small load and flowing slowly.✓✓
         iii) Nature of the bed rock.2mks
         Less resistant bedrock are eroded faster than the more resistant bedrock.✓✓
      d) i) The part labeled E,F and G in the diagram
         E- Distributaries
         F-Main river
         G-Alluvium swamp land   3x1=3mks
ii) Examples of then features represented in the diagram in Kenya.
- Arcuate delta
- Birds foot delta -   Estuarine delta.
- Caspate delta
- Inland delta   1x1=1mk
         iii) Three conditions necessary for the formation of the features shown in the diagram.
- The river must have a large load of sediments.
- There should be no obstacles like lake or swamp along the river course as they tend to block sediments from reaching the river mouth.
- The river should be flowing slowly upon entering the sea ensure deposition of a lot of materials at the river mouth.
- The rate of removal of sediments by the tides and currents should be lower than rate of deposition of materials.   d)Three other benefits of rivers in Kenya.
- Provide fish which is food for human beings.
- Some rivers act as a natural boundaries between countries, communities and districts.
- River deltas and flood plains contain fertile alluvial soils suitable for agriculture.
- Rivers that are navigable provide route ways.
- Rivers provide fresh water used for irrigation.
- Rivers provide sites suitable for generation of H.E.P. -   Rivers provide good sites for tourists attraction eg waterfalls.
      e)i) One stage along the long profile of a river where your study can be conducted
-    The old stage
      ii)Two methods you would use to collect data during the study.   2mks
- Observation
- Taking photo
- Taking notes
- Answering questionnaires.   iii) One benefit of river deposition that you intend to verify during the study.
- Valuable minerals eg gold and diamond.
- River delta and flood plains which contains fertile soil for agriculture.

10. a)i) Magnitude: measure of the amount of energy given off by an earthquake.✓1

                Intensity: measure of how hard/strong an earthquake shakes the ground.✓1   b) i)-Circum –pacific best

- Mid-Atlantic ridge
- Mediterranean –Himalayan belt
- Great Africa rift Valley   Ancy 3x1=3mks   ii) Tectonic movement
- Vulcanicity
- Gravitative pressure
- Isostatic adjustment
- Excessive energy released   in the mantle.   Any 4x1=4mks
    b) i)   A- Conelet /parasitic cone

B-Crater
C-Pipe   ii)
- Consists of a mixture of lava and ash arranged in alternate layers.
- Built up in series of eruptions over a long period of time.
- Starts with violence eruptions which throws out pyroclasts followed by outflow of acidic lava.
- Later eruptions may blow off the summit to form a crater.
- Parasitic cones may form on the sides.   5x1=5mks
    d) i) –Acidic lava cones -

Shield domes/basic lava domes
- Ash and cinder cones
- Composite /strato volcano.   3x1=3mks   ii)
- Direct observation
- Sampling
- Questionnaire
- Oral interviews   any 3x1=3mks   iii)
- seeking permission from the head teacher.
- Conducting a pre-visit
- Adjusting the objectives and hypothesis after the pre-visit.
- Selecting relevant methods of data collection.
- Assembling necessary tools.
- Preparing a working schedule Any other relevant point
                   Mark the first two @ 1mk max 2mks

THARAKA SOUTH JOINT EVALUATION EXAM
Kenya Certificate of Secondary Education
312/2
GEOGRAPHY PAPER 2
SECTION A
MARKING SCHEME

1. a)**Stratification of urban centers through models that outline the internal structure of an urban area.**   **2mks**
    b) -Central Business District (CBD)
        -Transitional Zone
        -Industrial Zone
        -Residential Zone
        -Commuter Zone   any 3x1=3mks
2. a) Mining that occurs in the alluvial deposits along river valleys and delta.✓✓2mks
    b) Vein- are minerals which form in cracks and joints in rocks when magma solidifies in small quantities ,while Lodes-Mineral that forms from solidification of magma in cracks and joints in large quantities.✓✓2mks   NB: While must be mentioned to score.
3. a)Andromous : type of fishing where the fish caught breed in rivers and liver in the ocean. Crustacean: Fishing that involves catching of sea animals other than fish. b) Kingfish
        -Tuna

-mullet
-Sardines
-Borito.   Any 3x1=3mks

4. a)Cottage industry is a small scale industry which uses raw materials and requires little capital to start and operate.✓✓2mks b)-
- It requires little capital investment.
- It decentralizes industries reducing rural urban migration.
- Requires little skills -   Encourages innovations
- To diversify export goods.
- To cater for local needs/save on foreign exchange.
- To produce cheap consumer goods.
- To make use of locally available raw materials.
- To create employment opportunities.
- Urban sprawl: Expansion of human settlement away from the central urban areas into previously remote and rural areas.
                                    Any 4x1=4mks

5. a)   i) X –Amboseli ✓1mk
ii)\y-Marsabit ✓1mk
iii)Malindi ✓1mk   b)
- Establishment of research   centers to train people on wildlife management.
- Veterinary services to treat the animals
- Public campaigns on the importance of wildlife.
- Employment of game wardens to prevent poaching.

SECTION B

6. a)Sony
    15cm   ——1000(000) tonnes
    ?   ←——50——
    ——=——=0.75 cm✓1

    Nzoia
    $\frac{15 \times 100}{1000}$ =1.5cm✓1

    Chemelil
    $\frac{15 \times 200}{1000}$ =3cm✓1

    Muhoroni
    $\frac{15 \times 250}{1000}$ =3.75cm✓1

    Mumias
    $\frac{15 \times 400}{1000}$ =6cm✓1   max 7mks

  Tittle a divided triangle   Correct
length 15cm✓1
ii) Difference in tonnage produced by Muhoroni and Nzoia companies   1mk
  Muhoroni 250,000
  Nzoia 100,000
  250,000-100,000=150,000tonnes.   1x1=1mk
iii) Advantages of representing data using a divided rectangle 2mks
- It is easy to compare the components
- Can accommodate different types of items
- Gives a good visual impression.   2x1=2mks
  b)Physical conditions required for growing sugarcanes successfully in Kenya.
- High temperature ranging 20^0-27^0Cthrough out the year .this promotes sugar accumulation.
- Rainfall between 1250mm to 2000mm throughout the year /high rainfall.
- Soils should be well drained, black cotton or clay soils that retain a lot of water.
- Topography of the land should be undulating flat or gently sloping. This allows mechanization especially in land preparation eg ploughing.

- Dry sunny harvesting spell which allows for maximum accumulation of sucrose and eases the harvesting and transportation of cane.   4X2=8mks

c) i)Uses of sugar

- Used as sweetener in beverage and foods.
- It is used in making confectioneries eg bread ,cakes, biscuits.
- It is used in making industrial alcohol eg ethanol.
- Molasses is used in livestock feeds.
- Brown coarse sugar and molasses are used in manufacturing of local brews.
- Cane residue (bagasse) Is used as fuel and manure.

ii) Benefits of sugarcane growing to the Kenyan economy.   4mks -   It has created employment to many Kenyans.

- Establishment of sugar mills in the growing areas contributes to industrial development
- Sugarcane growing is a source of raw material for industrial plant eg manufacture of industrial spirits.
- Sugarcane has contributed to the growth of towns eg Muorobni.
- It has produced sugar for industrial use hence saving foreign exchange that could be used in importation.
- Source of income to the farmer hence raising their living standards. 4X1=4MKS 7. a) –Retail trade
 -Wholesale trade.   2x1=2mks

b) Difference in value between visible and invisible exports and visible and invisible imports.✓✓2mks   c) i)Crude oil

- Fertilizers
- Vehicles
- Pharmaceutical
- Iron and steel
- Machinery.   Any first 3x1=3mks

ii)Poor infrastructure /inaccessible roads hinder movement of goods.

- Insecurity in some parts of Kenya discourage traders.
- Inadequate capital to expand trade.
- High taxation by the government and local authorities discourage trade.
- Imposition of restrictions on the goods to be imported or exported.
- Low purchasing power among Kenyans due to poverty.
- Smuggling of goods into or out of the country   any 5x1=5mks   d)
- Civil wars/strife in some countries creates insecurity /discourage trade.
- Production of similar goods reduces the volume of trade.
- Poor transport and communication links hinder movement of goods.
- Free trade leads to collapsing of local industries..
- Some countries do not remit their annual subscription slowing down the operations of trade blocs.   Any 4x2=8mks e)
- Creating of a large market for goods.
- Promotion of peace and harmony among member countries.
- Expansion of sectors such as agriculture and industries which help in creation of employment opportunities.
- Improvement of transport and communication links.
- Reduced tariffs make goods cheaper to the people in the region.   any 5x1=5mks

8.   a) i)Eco- tourism – combination of tourism with conservation of environment.✓1mk
      ii)Game reserves found in the rift valley
          -    Maasai
          -    Bogaoria
          -    Shabal(Marsabit)
          -    Samburu Buffalo springs
          -    Elementaita   first 2x1=2mks
      iii)

National park	Game Reserve
-An area set aside for preservation of scenery wildlife and historical sites.	-An area set aside for preservation of wild game.
-May be fenced off and no other form of land use is permitted.	-Land use by the public is allowed usually for livestock grazing.
-Usually managed by the central government.	-Usually managed by devolved government county authorities.

NB: Difference must be complete win order to score.   2x2=4mks **b) Three factors that hinder domestic tourism in Kenya.   3mks**

- Inaccessible roads to the parks /of the roads get muddy and impassible during the rainy season.
- Poverty ie high risk cost of accommodation in hotel/lodges in game reserves.
- Kenyans do not appreciate beauty /cultural values of tourists sides.
- Foreigners are treated better than locals. -   Inadequate adverts /the locals are not aware.   **ii) Two negative effects of tourism in Kenya.**
- Waters down our values and traditional ethics.
- Some may bring in dangerous diseases like HIV/AIDS when they have sex with our people.
- Theft of foreign currency since most hotels are owned by foreigners.   2x1=2mks

C)i)Differences between tourists attractions in Kenya and the Switzerland.

Kenya	Switzerland
-Has hot and warm climate all year round	-Has hot summers and cold winters
-Has sports all year round	-Has zoos and glaciated features which form major tourists attractions.
-Coastal beaches available for use throughout the year.	-Lakes beaches available during summer.
-Hass more varied cultural systems	-Less varied cultural system

NB: Complete difference 2x1=2mks

ii)Two reasons why domestic tourism is encouraged in Kenya.
- Development of tourists facilitates which provides employment opportunities and raising standards of living.
- Earn foreign exchange used to develop other sectors of the economy.
- Tourists provide ready market for trade items.
- Has stimulated growth of agriculture and other related growth of industries due to the demand for agricultural products in the hotels.
- Establishment of National Parks and museum as tourists attractions enabled Kenyans to protect /preserve its rich cultural heritage.
- Tourist encourages cultural exchange which promotes international understanding.   2x1=2mks   **iii) Three physical factors that favour tourism in Switzerland.**
- Magnificent mountain scenery in Swiss Alps attract Mt. climbers.
- Glaciated lakes-numerous lakes on the Swiss plateau formed through glaciated have clean, fresh blue water for sports fishing.
- Climate –cool temperatures climate and med climate with warm summers.
- Presence of many rivers fed by the melting snow from the Mts generates HEP to run electric trains.   3x2=6mks

iv)Why Kenyan Government encourage tourists visit in Kenya.
- To earn foreign exchange /currency income.
- To create employment opportunities /jobs.
- International tourism fosters international understanding and friendship ties.
- To develop transport ie Roads to benefit local people.   3mks

9. **a)i) Difference between exotic and indigenous forests.**
- Indigenous forest is a forest that is made of trees which are nature/natural to a country while exotic forest is a forest that is composed of trees that are alien to a country.✓✓   2mks ii)Forests marked   M-Equatorial ✓1mk R-Montane ✓1mk

iii)Factors that lead to depletion of forests in Kenya.
- The government policy of de-gazettement has allowed illegal /cultivation and settlement forests.
- Increases population of elephants that destroy trees.
- Prolonged drought have caused drying up of some trees.
- Plant diseases and pests eg Aphids destroy parts of forest.
- Over- Exploitation of certain species of trees.   3x1=3mks

b)Factors that favour the growth of natural forests on the slopes of Mt. Kenya.
- The area receive high Rainfall /1100mm-2200mm throughout the year✓F which encourages continuous growth of trees.✓E -   The area has deep fertile volcanic soil ✓F that allows the roots to penetrate deep into the ground for proper anchorage.✓E -   The area is a gazette reserve prohibiting cultivation and settlement hence allowing growth of trees.
- The steep slope ✓F discourages settlement thus ✓E forests thrive.   3x2=6mks

c) Comparison between forestry in Kenya and Canada under the following sub headings:
        i)Distribution of forests.
- In Kenya forests are mainly established in the highlands regions while in Canada the distribution involves both highlands and lowlands.   2mks

ii)Transport
- In Kenya transportation is mainly by road transport while in Canada transport is mainly by water transport.2mks

d) Factors favoring the development of softwood forests in Canada.
- Cool to cold climate favours the growth of coniferous trees.
- Rugged landscape and steep slopes discourages agriculture and settlement hence forests   establish themselves naturally.
- Canada has a low population density hence a lot of land for forestry.
- Presence of heavy rainfall on the windward slopes of mountain ranges supports tree growth. 3x1=3mks   **ii) Measures used to conserve forests in Kenya.**
- Mature trees felled are replaced immediately (re-afforestation)
- Tree farming is practiced in many parts with the aim of raising trees for future use.

- Regions which were previously devoid of trees are being planted with trees (afforestation) -   People are now being encouraged to plant trees and food crops in the same farms/agroforestry.
- Reduction of wastage eg the use of waste paper to produce news print.
- People are required to seek permits if they have to cut trees. This reduces the rate of tree felling /unlicensed people do not cut down trees.
- Forest reserves have been set aside to conserve indigenous species.
- Forestry dept. of the ministry of natural resources carry out research to produce and distribute seedlings to ensure the extension of forests.
- People are being educated through mass media on the importance of trees. Any 3x1=3mks

10.   a)i) Modes of transport 3mks

-Land
-Water
-Air
ii)Transfer of money
- Ordering of goods through messages.
- Reduce movement of traders.
- Provides security in storage of money.   2x1=2mks

iii)Problems facing communication in Kenya.
- Inadequate capital to install communication equipment.
- Language barrier due to diverse ethnic backgrounds /low level of education.
- Inadequate communication facilities.
- Vandalism of communication equipment /wars. -   Inefficient communication system /networks failure.

b) Four advantages of rail transport over road transport.
- Railways are more reliable and efficient because they follow a fixed time schedules unlike roads which have no fixed timetable.
- Railways can be used to move heavy and bulky goods at low rate over long distance compared to roads which are expensive over short distances.
- Once build railways do not require frequent relaying unlike roads which are frequently resurfaced.
- Railways are normally narrow hence economical in terms of landscape used by rails. Roads take alot of space on some are very wide. -   Railways are less susceptible to traffic jams unlike roads which usually have traffic jams.
- Trains are less prone to accidents than motor vehicles.
- Passenger trains have facilities like accommodation, dining and toils which makes the passengerscomfortable while travelling while such facilities are rare in road transport.   Any 4x2=8mks **c)   i)Highways marked**

X-
Trans Saharan highway✓1
        Y- Trans African highway✓1
             ii)M-Dakar ✓1
                  V- Democratic Republic of Congo✓1

d)i) Reasons why it is difficult to transport goods from Mombasa to Lagos by road.
- Tariffs charged at border points increase transportation costs.
- There is long distance between the two parts which would take a long time.
- Some parts of the highway are impassable during the wet season.
- There are civic wars / banditry along the way eg DRC.
- There are political differences and hostilities between some countries through which the highway passes. 2x1=2mkls   **ii) Four efforts to improve transport in Africa.**
- Construction of highways across continents
- Construction of international railways with similar gauge -   Construct ion of national and international airports.
- Establishment of regional /economic cooperation eg COMESA ,EAC etc.
- Sourcing of funds from external lending bodies eg World Bank, IMF.
- Diversifying forum of transport.
- Invest in training to equip citizens with the technical skills linked with transport sector.
- Reservoirs have been constructed across some rivers to improve navigation eg L. Kariba along Zambezi. Any 4x1=4mks

GEM SUB – COUNTY JOINTBEVALUATION EXAMS 2015
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GEOGRAPHY PAPER 1
SECTION A

Answer all questions in this section

1. a) Name two isothermal layers of the atmosphere. (2marks)
b) State three ways in which the atmosphere is heated. (3marks) 2. a) The diagram below shows a compressional plate boundary .
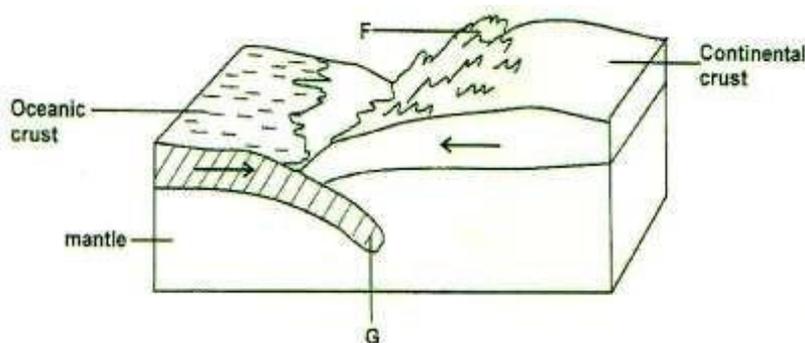
Name

i) The feature marked F. (1mk) ii) The ozone marked G. (1mk)
 b) State three effects of plate collision on compressional plate boundaries. (3mks) 3. a) Differentiate between weathering and mass wasting. (2mks) b) Give three ways in which plants cause weathering in rocks. (3mks) 4. a) Give three conditions necessary for formation of artesian wells. (3mks) b) State two significance of ground water. (2mks) 5. a) List TWO significance of ground water. (2mks) b) State three ways in which a gorge is formed. (3mks)

SECTION B

Answer question SIX and any other Two question in this section.

6. Study the map of Migwani (sheet 151/1) provided and answer the following question.
a) i) Convert the scale of the map into statement scale. (2mks) ii) Identify Two physical features found in Grid Square 1277 to the east the area covered by the map. (2mks)
iii) Which map sheet adjoin Migwani 151/1 to the east? (1mk)
b) i) Reduce the area bounded by Eastings 06 and 13 and Northing 63 and 70 by half. (2mks)
ii) In the reduced area, mark anad name the following features.
-Zombe and Kitui – Yoonge dry –weather road
D509.   -Mutito forest ridge.
-Ikoo river
-Mutito (Ndooa) shops.
(4mks) iii) Calculate the new scale of the reduced area. (2mks) c) Describe the drainage of the area covered by the map. (5mks)
d) Citing evidence from the map, explain TWO conditions that favour cattle rearing in the area covered by the map.
(4mks)
e) Students in your school studied the influence of relief on drainage of the area covered by the map.
 i) Formulate a null hypothesis they may have used in their study. (1mk) ii) State two reasons why they conducted a pre-visit. (2mks) 7. a) i) Differentiate between folding and faulting. (2mks) ii) List three types of faults. (3mks) b) State three ways in which faulting can influence drainage system. (3mks)
c) Using a well- labeled diagram, describe the formation of rift valley by tensional forces. (7mks)
d) Explain three effects of faulting on human activities. (6mks)
e) Students in your class conducted a field study on a faulted landscape in the Rift Valley of Kenya.
i) State two objectives that would guide their study. (2mks)
ii) State two reasons why you would need a route map. (2mks)
8. a) List two external land forming processes that may lead to the formation of lakes. (2mks) b) Identify Three sources of water found in a lake. (3mks)

c) Give three ways in which lakes may influence the natural environment in which they are found. (6mks)

d) i) State three characteristics of lakes formed due to faulting. (3mks) ii) Explain three reasons why some rift valley lakes are drying up. (6mks)

e) You intend to carry out a field study of lake Kanyaboli in Siaya county.
   i) Design a working schedule you will use for your study. (3mks) ii) Why would it be important to hold group discussion during breaks in the process of data collection. (2mks)

9. a) i) Define the term karst scenery. (2mks) ii) Outline three conditions necessary for the formation of karst scenery. (6mks)
   b) Using a well- labeled diagram, describe how the following features of limestone areas are formed.
 i) Stalactite (5mks) ii) Dolines (5mks) c) Explain three ways in which limestone landscape influence human activities. (3mks)
   d) Form four students of your school undertook a field study on a karst landscape.
 i) State two objectives of their study. (2mks) ii) Give two reasons why they concluded that some areas of karst landscape were unsuitable for settlement. (2mks)

10. a) Name two earthquake zones of the world. (2mks) b) Apart from vulcanicity, give three causes of earthquakes. (3mks)
   c) Using a well labeled diagram, describe how a composite cone is formed. (7mks)
   d) Explain four negative effects of vulcanicity on the physical and human environment. (8mks)
   e) You intend to carry out a field study on resultant of vulcanicity in the Rift Valley.
      i) List three features you would study. (3mks) ii) Give two methods you would use to record your data. (2mks)

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GEOGRAPHY PAPER 2
SECTION A

Answer all questions in this section.

1. a) Define eco-tourism.   (2mks)   b) State three factors which have made Switzerland a major tourist destination. (3mks)
2. a) Name three functional zones of an ideal urban center.   (3mks)   b) State two benefits that would arise if more commuters in urban centers in Kenya used public transport. (2mks)
3. a)   State three advantages of using containers in the transportation of goods in Kenya.   (3mks
  b) Give three reasons why there are a few rail links among African countries.   (3mks)
4. a) What are tertiary industries ?   (2mks)   b) List three reason s why development of the Jua Kali industry is encouraged in Kenya. (3mks)
5. a) State how the following factors have led to the population increase in Kenya.
 i) Cultural beliefs   (2mks)   ii) Early marriages   (2mks)

SECTION B

Answer question 6 and any other two questions from section.

6. The table below shows the values of Kenya import in million shillings between the years 2005- 2009. Use it to answer the following questions.

Year	Crude oil	Industrial machinery	Pharmaceuticals
2005	91,200	15,700	58,300
2006	93,700	17,100	82,400
2007	87,000	21,200	72,500
2008	120,200	32,300	75,600
2009	121,900	37,100	68,100

a) Calculate :
   i) The total value of industrial machinery imported by Kenya from the year 2005-2009.   (2mks) ii) The total value of Kenya's imports in the year 2008.   (2mks)
b)i)   Draw a comparative bar graph to show Kenya's imports between the years 2006 and 2009. Use a vertical scale of 1cm to represent a value of 10,000 shillings.   (9mks)
ii) State two advantages of using a comparative bar graph to represent statistical data.   (2mks)   iii) Give two reasons why Kenya imports some of the items it produces.   (2mks) c)   i)
Outline four reasons why there is little trade between Kenya and other African countries.   (4mks) ii) Explain two steps that can be taken to improve Kenya's balance of trade.   (4mks)

7. The diagram below shows the cocoa triangle in Ghana. Use it to answer the questions that follow.
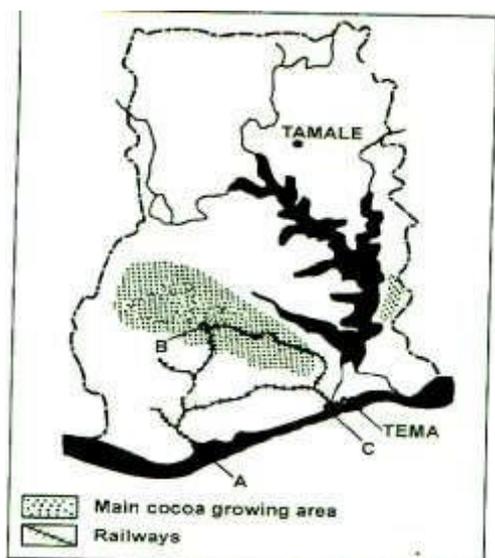
a) i) Name the towns marked A, B and C.   (3mks) ii) State four physical factors that favour the growth of cocoa.   (4mks) b) i) Outline the stages involved in the processing of cocoa from harvesting to the time it"s ready for export.   (8mks) ii) State two uses of cocoa.   (2mks) c)   i) Name two exotic breeds of cattle reared on commercial ranches in Kenya.   (2mks) ii) Explain three factors that favour the development of beef industry in Argentina.   (6mks)

8. a) i) Differentiate between forestry and agro-forestry.   (2mks)

    ii) Apart from agro-forestry, explain four measures being taken by the government of Kenya to control human encroachment on forested areas.   (8mks) b) i) Name two exotic species of trees planed in Kenya .   (2mks) ii) Give the difference between softwood in Kenya and Canada under the following sub-headings.

   -Harvesting period   (2mks)

   -Diversity of the softwood trees species.   (2mks) c) i)
Name three non- wood products from the natural forest of Kenya.   (3mks) ii)
Explain three human problems facing forest in Kenya, apart from human encroachment.   (6mks)

9. a) i) Define land reclamation.   (2mks)   ii) Give two methods that are used to drain swamps in Kenya.   (2mks)

  b) Study the map of Mwea Tebere and use to answer the following questions.
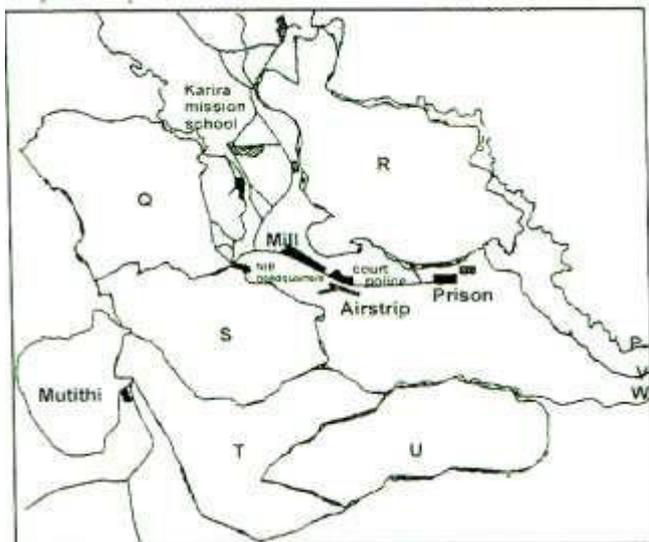
  i) Name the rivers marked P, V and W.   (3mks) ii) Name the sections marked Q and U.   (2mks)
    iii) Name the method of irrigation used in Mwea Tebere.   (1mk)

c) Explain how the following factors influenced establishment of Mwea Tebere irrigation scheme.
- Topography   (2mks)
- Soil   (2mks)
- Government policy   (2mks) d) i) State four characteristics of the polders of Netherlands.   (4mks) ii) Describe the processes of land reclamation in Mwea Tebere.   (4mks)

10. a) What is drought?   (2mks)
 b) Explain five negative effects of drought in Kenya.   (10mks)
c) You carried out a field study on pollution in Kisumu town.
 i) Name f our main   types of wastes they came up with after the study.   (4mks) ii) Suggest five ways by which waste within Kisumu Town can be managed.   (5mks)   iii) Give four methods that you would use to collect information on pollution.   (4mks)

GEM SUB-COUNTY JOINT EVALUATION EXAMS 2015
KENYA CERTIFICATE OF SECONDARY EDUCATION (K.C.S.E)
MARKING SCHEME
Geography (312/1)

SECTION A

1 a) *Isothermal layer*

☐ Tropopause

☐ Stratopause

☐ Mesopause   *(2 x 1 = 2mks)*   b) State 3
   ways in which the atmosphere is heated.

☐ Sun"s heat in transmitted outwards equally in all directions in waves through radiation. ☐ Heat is transferred through matter without moving the matter through conduction.

☐ Heat is transferred by movement of fluids e.g air or water through convection.   *(3 x 1 = 3mks)*

2

a)   i) F - fold mountain

ii) Subduction zone

b)   Effects of plates
collision on compression
boundaries. ☐   Leads to
volcanicity/islands ☐
        Causes
Earthquakes.

☐ Development of trenches.

☐ Formation of coastal fold mountains.

3

a)   Weathering is the mechanical breakdown or chemical decay of rocks in situ as a result of their exposure on the earth   surface while mass wasting is the down slope movement of material under the influence of gravity. b) Ways in which plants cause weathering in rocks.

☐ Plant roots grow in cracks and joints in rocks enlarging them.

☐ Plant decay to release organic acid that accelerate the rate of weathering.

☐ Plants like algae and lichens cover the rock surface keeping them moist thereby encouraging chemical weathering.

☐ Plant roots break rock as trees fall during strong winds.   *3 marks* 4   a)   Conditions for formation of Artesian wells.

☐ Aquifer must be sand witched between impermeable rocks so that it can retain water

☐ Aquifer must outcrop in a region which is a source of water. This could be a rainy area or beneath a lake.

☐ Aquifer must dip from a region of water intake and the rock layers must form a broad syncline or basin.

☐ The mouth of the well must be lower then the intake area. This allows the water to be forced to the surface by pressure without need of pumping it.
        b)   Significance of ground water.

☐ Some ground water form sources of some rivers.

☐ Ground water can be used for irrigation purposes.

☐ Source of domestic fresh water.

☐ Hotsprings have been tapped and pumped into cold houses in cold seasons e.g Iceland.

☐ Source of minerals.

☐ Tourist attractions e.g. springs, artesian wells.

5

        a)   Processes of river erosion

i) Corrosion ii) Hydraulic
action   iii) Solution   iv)
Altrition

        b)   Ways in which a gorge is formed.

☐ Gorge formed where a river maintains its course across land which is being uplifted/Antecedent gorges.

☐ Gorge formed where there is an abrupt fall in the base level causing river to renew its erosive activity.

☐ Gorge formed due to river rejuvenation.

☐ Gorge formed where the river flows along a line of weakness /cracks ☐ Gorge formed where a waterfall retreats upstream

☐ Gorge formed where a river flows across a plateau.

SECTION B

6

a   (i) <u>Convert map scale into statement scale</u>

       Convert denominator in kms

       100000cm   =   1mk

       50000   = $\dfrac{50000 \times 1}{100000}$ = 0.5km

     1cm represents 0.5km   (2mks)

ii) <u>Physical features found in at 1277</u>

       i)   Gentle plain

       ii)   River/stream

iii) Scrub vegetation/scattered tree vegetation.   (2mks)

iii) i)   Nguni 137/4

       ii)   Nuu 151/2

       iii)   Mwitika 151/   (1mk)

b)   i)   Refer to graph paper attached

    ii)

$\dfrac{1}{5000}$ x $\dfrac{1}{2}$ =   1:10000

                           = $\dfrac{1}{100000}$

                                (**2mks**)
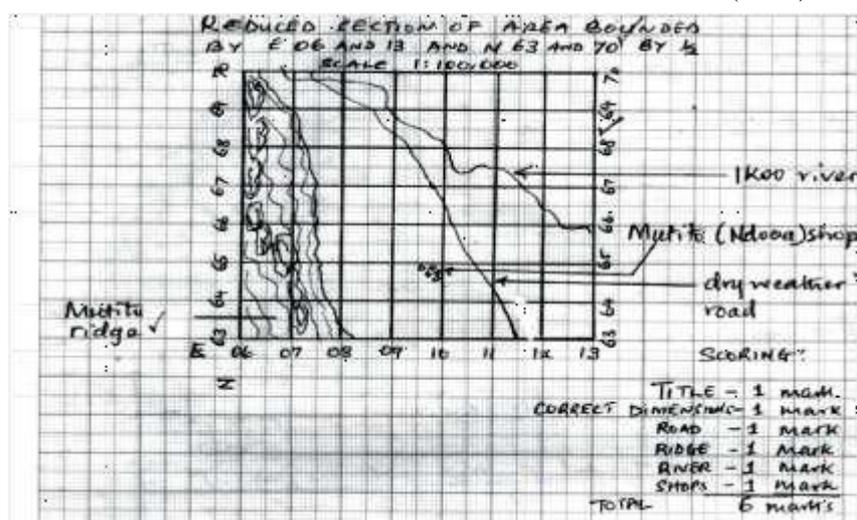
c)   <u>Describe drainage of area</u>

☐ There are many rivers e.g R. Munyuni.

☐ Most rivers are permanent e.g R. Ikoo.

☐ Most rivers have their sources in the Kitui hills.

☐ Most rivers flow towards the South East from NE - SE.

- Main river is river Ikoo.
- Most rivers have a dendritic pattern e.g Ikoo
- Some rivers have their sources at springs e.g rivers flowing from Mutito forest.
- Rivers draining from Mutito forest have parallel pattern.
- R. Ikoo has trellised drainage pattern at GR 0272.

d) Conditions favouring cattle rearing in the area covered by the map.

- The sparse population evidenced by the dispersed settlement in the N.East of provider wide tracts of land for cattle rearing.
- The presence of scrub vegetation and scattered trees in Usiani provides plentiful pasture for cattle.
- The relatively high altitude of 1200 - 1500m at Kamutotya GR 9374/Mutito forest provide cool conditions suitable for cattle growing.
- The dense settlement at Mutitu(Ndooa) in the S.E provides market for cattle/cattle products.
- The availability of good transport network e.g Thitani Thokoa all weather road (bound surface) eases transport of cattle/cattle products to the market.
- There are numerous permanent rivers providing plenty of water to the cattle. e)   The Null hypothesis
- There is no relationship between relief and drainage of Migwani.
- Most rivers do not originate from the highland west of area covered.
- Most rivers in Kitui hills do not have dendrific pattern.

    II) Importance of previsit

- Identify suitable points from which data could be collected.
- They may have isolated possible problems they may likely face.
- To project the cost of the study.
- May have identified the availability of data they would require.
- Confirm the suitability of their equipment for the environment in which they studied.

7
a) Folding is the bending of crustal rocks due to crustal distortion while faulting is the cracking of crustal rocks due to tensional or compression forces. (2mks) ii) <u>Types of faults</u>
- Normal faults
- Reverse faults
- Anticline faults
- Tear/shear faults (3 x 1 = 3mks)

b) <u>Ways in which faulting influence drainage systems.</u>
- Vertical faulting across rivers cause waterfalls.
- Rift faulting results in the formation of lakes/basin drainage / centripetal drainage patterns.
- Some rivers flow along fault lines, forming fault-guided drainage pattern. Land uplift may cause reversal in direction of rivers Rivers may disappear into faults.
- Fault scarps expose impermeable rock layers to the surface resulting in formation of springs. c) <u>Formation of a rift valley by Tensional forces</u> Rock layers are subjected to tensional forces
- Parallel normal faults or lines of weakness develop.
- The middle block gradually sinks/subsides.
- The sunken middle block form along trough - like feature with steep parallel sides known as a Rift valley.

Rift valley   Tensional forces

Rock layers
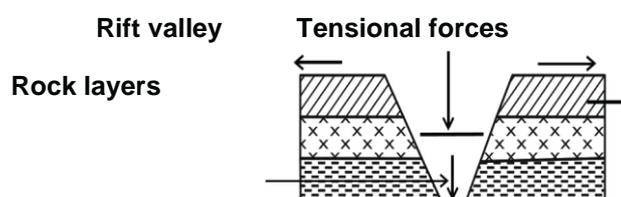
subsidence

d) <u>Effects of faulting on human activities</u>
- Features of faulting result in unique sceneries which attract tourists hence earns forex.
- Faulting causes displacement of rocks, exposing minerals thus making mining easy.
- Faulting lead to formation of block mountains which attract relief rainfall on the windward side thus give rise to rivers which are harvested for HEP production or domestic use/industrial use.
- Deep faults allows underground steam jets to escape, which are then harvested for geothermal power production.
- Rivers flowing over fault scarps form waterfalls used for generation of HEP. (3 x 2 = 6mks) e (i) <u>Objectives</u>
    i) To find out features resulting from faulting ii) To establish or investigate how faulting has influenced settlement and human activities in the area.
    ii) <u>Importance of route map</u>
        i) For direction to area of field study.
        ii) Ensure little time used in transport to the area of study.

8
a) <u>External land forming processes leading to the formation of lakes.</u>
- Glaciation
- Erosion by wind
- Down warping
- River and wave deposition. (2 x 1 = 2mks) b) <u>Sources of lake water.</u>
- Rivers
- Rainfall
- Underground water
- Melt water
- Magmatic water (3 x 1 = 3mks) c) <u>Influence of Lakes on Environment.</u>
- Land/breezes may lead to formation of convectional rainfall.

- Lakes harbour microbes which are habitats for disease causing microbes like mosquitoes and snails □ Lakes may lost dangerous animals that cause destruction to men and property.
- Breezes may strengthen direct or reverse the prevailing winds.
- Evaporation of lake H2O increases the relative humidity over the surrounding areas by supplying extra moisture.
- Winds from the lake to the land lower the temperature of the surrounding area during the hot periods.

3 × 2 = 6 marks

d) Characteristics of lakes formed due to faulting.
  - Most are narrow.
  - Most are steep sided.
  - Most are salty.
  - most of them are long *3 × 1 = 3 marks* e) Working schedule for the field study.
    8.00am - Collect and assemble equipment/tools
    9.00am - Departure
    10.00am   - Report to authorities
    10.15am   - Collect data
    11.00am   -
Break/Discussion/collate   2.00am - Report back to authorities.
    3.00am - Departure   *3 marsk*

      (ii) Importance of group discussions.
- To minimise on time lost.
- To asses on data collection course.
- To remain on course.
      (iii) Reasons why Rift valley lakes are almost   at the verge of extinction.
- Some loose water through underground seepage/through faults at the bed.
- Some loose water through high evaporation because of Lakes location in ASALS.
- Reduced rainfall in their catchment areas due to forest destruction thus little volume of rivers flowing into them/dried rivers.
- Increased siltation due to deforestation and improper agricultural practices in the surrounding areas hence reduced depth.
- Increased demand for water from the feeding rivers for domestic/agricultural/industrial use reduce volume of rivers flowing into lakes.   *3 × 2 = 6 marks*

9
a) Karst scenery is any rugged landscape whose surface rocks are limestone or dolomite and which has been acted on by carbonation and solution by rain and river water to produce features typical of limestone surfaces.
      ii) Conditions necessary for karst scenery formation.
- Surface rock and rock beneath should be thick limestone dolomite or chalk to allow seepage of acid rain.
- Rock should be hard and well jointed to enhance chemical process by solution process.
- Climate should be warm or hot.
- Rainfall should be moderate to high to enhance solution and carbonation process.
- Water table in the rocks should be deep below the surface.   (3 x 2 = 6mks)   Formation of: b) Stalactiles
- Carbon IV Oxide of the atmosphere combines with rain water to form weak carbonic acid rain water.
- The acidic rain falls on the surface of the land and reacts with some rocks e.g limestone dissolving the soluble $CaCO_3$ into $CaHCO_3$ solution.
- The solution of $CaHCO_3$ seeps through the joints into the cave.
- The temperatures in the cave is hot or higher
- Evaporation of water occurs in the cave leading to formation of precipitate of $CaCO_3$ deposit from the top of the roof of the cave.
- Continuous deposition of $CaCO_3$ downwards leads to formation of a fingure like projection from the roof hanging downwards This is called stalactite.   *5 marks*
      Doline
- Atmospheric CO_2 mixes with rain war to form weak carbonic acid rain.
- Acid rain falls on limestone rocks on the surface dissolving it by solution and carbonation process.
- Acid rain widens the joints forming swallow holes.

☐ iv) Continuous subsidence of swallow holes enlarges the sinkholes forming a large hollow called dolines *5 marks* c) Ways in which limestone landscape influence human activities. (3mks)

☐ Features formed in limestone areas e.g dolines, uvulas, form unique attractions site to tourists earning forex.

☐ Limestone rock provide raw materials used in the manufacture of cement used in building and construction. ☐ Ruggedness of limestone area discourage settlements, agriculture and infrastructure development. (3mks) d (i) Objectives of studying a karsts landscape.

☐ To find out features formed in limestone areas.

☐ To establish effect of limestone landscape on human activities. (2 x 1 = 2mks) ii) Reasons why karst landscape is unsuitable for settlement:

☐ The area is rocky.

☐ Area has thin soils.

☐ Area has poor vegetation.

☐ Area has inadequate surface H2O supply.

☐ Area has rugged landscape.

10

a) Earthquake zones of the world

(2mks) ☐ Circum pacific belt.

☐ Great Rift valley belt.

☐ Mid- Atlantic Ocean.

☐ The Tethyan - Mediterranean belt. b) Causes of Earthquakes

☐ Underground nuclear tests trigger vibrations.

☐ Movement of trains generate vibrations.

☐ Use of explosives during mining, quarrying trigger vibrations.

☐ Construction of large reservoirs activate or inactivate faults triggering off tremors.

☐ Isostatic adjustment.

☐ Plate tectonic movements.

☐ Tectonic forces.

c) Describe formation of composite volcano.

☐ Volcanic eruption eject solid materials (pyroclasts) onto the surface.

☐ Eruption of intermediate lava follows which covers the solid materials ejected.

☐ Subsequent eruptions joins alternating layers of ash and lava.

☐ The main vent may block forcing eruptions through other points of weakness on the sides of the cone leading to formation of parasitic cones. The feature formed is called composite cone. Composite cone.
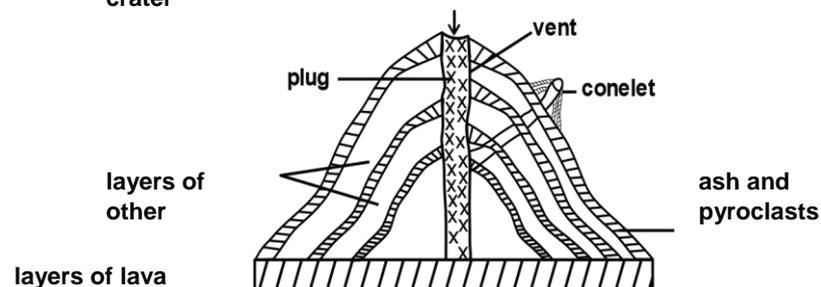
Text - 5 marks
Diagram - 2 marks

d) Negative effects of volcanicity on human and physical environment.

☐ Cause great loss of life and damage of property.

☐ Steep volcanic slopes discourages settlements.

☐ Steep volcanic slopes are barriers to construction of transport and communication lines.

☐ Volcanic ashes and granites lead to poorly drained soils discouraging agriculture.

☐ Volcanic mountains create rain shadow effect on the leeward side. e) i) Hot-springs

☐ Geysers

☐ Caldera

☐ Craters   ii) Methods used to record data.
☐ Photographing
☐ Note taking
☐ Sketching diagrams/maps

GEM SUB-COUNTY JOINT EVALUATION EXAMS 2015
Kenya certificate of secondary education (k.c.s.e)
MARKING SCHEME
Geography (312/2)

1
a) Eco-tourism refers to visiting places of interest for recreational purposes while taking care of animals and plants and their habitats.   (2mks)
b) Three factors which have made Switzerland a major tourist destination.
☐ Warm sunny summers allow for swimming and sun-bathing/cold winters encourage winter sports.
☐ Varied scenery.
☐ Central position of Switzerland within Europe.
☐ Political neutrality of Switzerland.
☐ Diversity of languages spoken in Switzerland.
☐ Developed transport network to tourist sites.
☐ Advanced training in the tourist industry/package tours.
☐ Availability of health resorts/spas.
☐ Inherent hospitality of the swiss.
☐ Developed financial institutions for easy transactions.
☐ Switzerland is the headquarters for some international agencies.   (Any 3 x 1 = 3mks)
2
a)   3 functional zones:
☐ Central business district.
☐ Residential zone.
☐ Manufacturing/industrial zone.   (3 x 1 = 3marks) b) Two benefits for commuter using public transport. ☐   It would help save fuel/petrol.
☐ It would help to ease traffic congestion.
☐ Create more room for parking.
☐ Government would save foreign exchange on fuel.   (Any 2 x 1 = 2mks)
3
a)   State three advantages of using containers in the transportation of goods in Kenya.
☐ Containers guard against theft of goods since they are sealed.
☐ They are even in shape hence occupy less space.
☐ They guard against destruction of goods.
☐ Saves time when loading and offloading since containers have a large capacity.
☐ Make loading and offloading easy since they are fitted with hooks/rings for handling (Any 3 x 1 = 3mks) b) Give three reasons why there are few rail links among African countries. ☐   Steep terrain/thick forests make it expensive to construct lines.
☐ Competition from other means of transport leads to neglect of railway transport.
☐ The rail lines are of different gauges making it difficult for the countries to link them.
☐ Inadequate capital limits to construction of new lines/maintenance of railways.
☐ Limited trade links due to the production of similar commodities make it unjustifiable to construct railway lines.
☐ Political difference/instability discourages attempts to link the line.
☐ Large areas of the continents are economically unproductive thus it would be uneconomical to link railways.
                                                      (3 x 1 = 3mks)
4
a)   What are tertiary Industries (2mks) ☐
These are industries that provide services. b)

- Some of Kenya's Juakali industrial goods are exported thus earning foreign exchange. □ It has created more employment opportunities hence raising the standard of living.
- It has led to increased rural development reducing rural-urban migration.
- Requires low capital investment therefore most Kenyans can afford to establish the industries.
- Uses locally available raw materials hence saves foreign exchange.
- It has led to the reduction of importation of some industrial goods thus saving foreign exchange (3 x 1 = 3mks) 5. State how the following factors have led to the population increase in Kenya.
    i) Some cultures encourage large families; in almost all culture, there is a tendency of preferring male children. This may lead to those who are not getting male children to have a large family as they hope to get boys/males.
    ii) Early marriages

i) People who marry early are likely to get more children because they have a long period during which they can get children.

6.

a) Calculate;
    i) The total value of industrial machinery imported by Kenya from the year 2005 up to 2009.
        123,400,000,000/ 123, 400 million
(2mks) ii) The total value of Kenya's imports in the year 2008.
        228,100,000,000/228,100 million.(2mks)
b (i) Draw a comparative bar graph to show Kenya's imports between the years 2006 and 2009. Use a vertical scale of 1cm to represent a value of 10,000 shillings. (9mks) ii) State two advantages of using a comparative bar graph to represent statistical data.
    i) Gives a clear visual impression.
    ii) Easy to draw/construct. iii) Easy to compare the components.
    iv) Easy to read/interpret. (2 x 1 = 2mks)

iii) Give two reasons why Kenya imports some of the items it produces.
- To carter for inadequate supply of similar item.
- For its citizens to have a variety of the same items.
- To maintain bilateral relationship with other countries.
- Some of the items it produces are expensive to produce. **(2 x 1 = 2mks)** c **(i) Outline four reasons why there is little trade between Kenya and other countries in Africa.**
- Production of similar goods among the African countries.
- There is poor transport and communication links for efficient transactions.
- They are limited/diversified products among African countries.
- There is inadequate capital for some traders which makes them unable to expand their trading activities.
- Insecurity in some countries discourages the traders due to huge loses.
- Complication in clearance of goods at border points or ports delays delivery of some goods and increase the cost of goods.
- Unexpected trade restrictions are sometimes imposed on Kenya's exports hence lower reproduction of such commodities.
- Some goods are inferior. **(4 x 1 = 4marks)**
A COMPARATIVE BAR GRAPH SHOWING THE VALUE OF KENYA'S IMPORTS IN MILLION SHILLINGS

BETWEEN THE YEAR 2006 AND 2009

KEY

crude oil

phamarceuticals
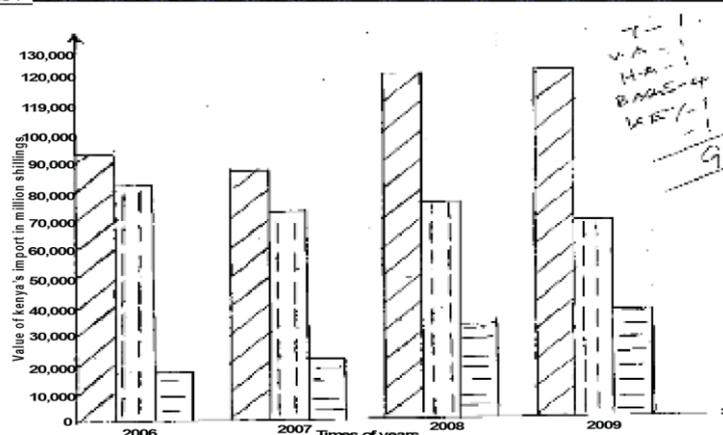
industrial machinery

c   **(ii) Explain two steps that can be taken to improve Kenya's balance of trade.**

☐ Encouraging the development of Jua kali industries which do not require importation of heavy/expensive machinery so that Kenya can export the Jua kali product.

☐ Restricting the import of luxury items through taxation.

☐ Establishing/protecting import substitution industries to cut down on importation of some commodities.

☐ Developing alternative sources of energy in order to reduce importation of fuel/petroleum.

☐ Diversifying the agricultural export base to enable the country to have variety of exports.

☐ Opening new markets to avoid dependency on trading partners.   **(2 x 2 = 4mks)**

7

a) i) Name the towns marked A, B, and C

    A   -   Takoradi
    B   -   Kumasi
    C   -   Aera   *3 × 1 = 3 marks*

ii) State four physical factors that favour the growth of cocoa.

☐ High rainfall/heavy rainfall/1270mm - 1500mm ☐ Well distributed rainfall throughout the year.

☐ High temperatures throughout the year/ 24ºc - 30ºc.

☐ High relative humidity throughout the year/80% - 90%.

☐ Deep soil.

☐ Well drained soils.

☐ Loamy soils/light soils/volcanic soils.

☐ Shade from strong sun rays for the seedlings.

☐ Sunshine for ripening of pods.   **(4 x 1 = 4mks)**

b   i)   **Outline the stages involved in the processing of cocoa from harvesting to the time it's ready for export.** ☐   The ripe pods are removed from the trunk and branches using a long sharp knife.

☐ The pods are collected and piled at a central place.

☐ The pods then split open with a sharp knife and beans scooped out by hand.

☐ The beans are put in heaps or mats and covered with banana leaves. They are allowed to ferment for 5 - 6 days during which the juicy pulp drains away.

☐ Fermented beans are washed and cleaned. Beans are spread on tables covered with mats to dry in the hot sun.

☐ The beans are turned frequently and as they dry and slowly they turn brown.

☐ Dry beans are put in sacks and sent to the harvest buying centre.

☐ At the centre the dry beans are weighed and graded ready for export.

☐ From the harvest buying centre, the dry beans are transported by rail to the ports or Accra, Takoradi and Tema from where they are shipped to many countries of Africa and Europe. *8 marks*

    ii)   **State two uses of cocoa.**

- Cosmetics
- Drugs
- Confectioneries
- Beverages.   (Any 2 x 1 = 2mks) **c)**
- Aberdeen Angus
- Hereford
- Charolais
- Red Angus
- Short horn Galloway
- Santa Gertrudis.   *2 × 1 = 2 marks*

ii) Explain three factors that favour the development of beef industry in Argentina.

- Replacement of coarse grass with alfalfa/corn has improved the quality of pastures/feeds for the beef cattle.
- Cross breeding of the traditional cattle with higher quality breeds/Hereford/Aberdeen Angus/short Horn has improved the quality of the yields.
- The maritime/warm and wet climate of the area makes cattle grazing possible throughout the year.
- Availability of water supplied using wind pumps ensures constant supply of water for cattle.
- Availability of vast lands/pampas/extensive grasslands suitable for cattle grazing encourages beef cattle ranching.
- There is a well developed railway network for taking beef to factories.
- Availability of market both local and external encourages the farmers to expand the beef industry/sustains the industry.
- Availability of refrigeration facilities enable beef to reach far off markets.   *6 marks*

8

a) i) Forestry is the science of planting, caring and using trees/forest and their associated resources, while agro forestry is the deliberate growing of trees and crops/keeping of livestock on a piece of land.   **ii)** Gazzetment of forested areas to delimit the areas and reduce encroachment by the public.

- Evicting people who have encroached forested areas in order to rehabilitate the forests.
- Educating the public/creating awareness on the importance of conserving forests to gain their support on conservation.
- Enacting/enforcing laws to prohibit cutting of trees within the gazetted areas.
- Employing forest guards to patrol forest reserves to ensure that illegal activities are reported.
- Encouraging people to use other sources of energy in order to reduce the demand for wood fuel. ☐   Fencing off forested areas/maintaining of buffer zones to keep away any intrudes into the forest. **b) (i)** Pine

  Cypress
  Blue gum/eucalyptus
  Wattle
  Kei - apple
  Jacaranda
  Bombay
  Granville
  Cedar

Casuarinas
Silky oat

ii) Tree harvesting

- In Kenya harvesting of trees is done throughout the year while in Canada harvesting is done in winter and early spring.
- In Kenya harvesting is done selectively in most cases while in Canada indiscriminate cutting of trees is done. *2 marks*

  Transportation of the logs.

- In Kenya, logs are transported by road/trucks while in Canada transport is mainly by water/rivers. ☐   In Kenya, transportation is expensive while in Canada it is cheap.   *2 marks*   **Diversity of the softwood tree species.**

  i)   The various types of softwood tree species in Kenya are low while in Canada, a wide variety of such trees prevail.

c   **(i)** Resins

  Gums
  Tannin
  Mushroom
  Tubers

Nuts

Fibres

Silk

Vegetables

Fruits

Medicinal herbs   Honey. *3 marks*

c   (ii) <u>Explain three human problems facing forests in Kenya.</u>

☐   The degazettement of state forests which reduces the total acreage under forests in the country.

☐   The outbreak of forest fires by hunters and honey harvesters which destroys the forests.

☐   Over-exploitation to meet the high demand for forest products particularly timber which reduces the area under forest cover greatly.

☐   High population growth which leads to encroachment of forests for purpose of farming and settlement causing cutting down of forests.

☐   Illegal logging which destroys large forest lands.

☐   Corruption by forest officers which results into massive cutting down of trees hence reducing the area under forest cover. ☐   Remoteness/inaccessibility of forest areas which hampers regular forest patrols for security purposes.

9

a) <u>Define land reclamation</u>

i)   Is a process of converting less productive land to a state for agricultural or settlement purposes.

ii)   **<u>Name methods that are used to drain swamps in Kenya.</u>**

☐   Constructing drainage pipes.

☐   Digging open ditches/canals.

☐ Pumping out the water

b   (i) <u>Name the rivers marked P, V and W</u>

P -   Thiba

V   -   Tebere

W- Nyamindi   *3 marks*

ii) <u>Name the sections marked Q and U</u>

Q -   Mwea

U   -   Tebere *2 marks*

iii) <u>Name the method of irrigation used in Mwea</u>

<u>Tebere.</u>   i)   Canal irrigation *1 mark*

c)   <u>Explain how the following factors influenced establishment of Mwea Tebere irrigation</u>

<u>scheme.</u>   i)   <u>Topography</u>

☐   The gently sloping land makes it possible for water to flow by gravity out of the irrigated field.

☐   The gently sloping land allows for mechanization which allows large areas to be put under cultivation. *2 marks*   **ii) <u>Soils</u>**

i)   Presence of black cotton soil which is suitable for cultivation of rice retains water for a long time. *2 marks* **iii) <u>Government policy</u>**

☐   i)   There was need to keep political detainees busy. This made the colonial government to set up the scheme where there was large detention camp.   *2 marks*

ii)   **<u>State four characteristics of the polders of the Netherlands</u>** ☐   The soils are highly desalinized.

☐   They are protected by dykes against gales/sea encroachments. ☐   They are surrounded by Ring Canals to facilitate drainage.

☐   They are divided into specific land use activities.

☐   The land is intensively utilised.

☐   Horticulture is the predominant agricultural activity.

☐   They are large in acreage/area/size.

☐   They are relatively flat.

☐   They are largely flat.

☐   They are largely below the sea level. *4 marks*

d) Describe the process of reclamation of Mwea Tebere irrigation scheme.

☐ The vast land of 14721 acres is divided into plots of 1Ha.

☐ Each plot is surrounded by ridges of earth to hold water.

☐ A main canal is constructed to direct water from the Rivers Thiba/Nyamidi.

☐ From the main canal, smaller canals are dug to access the plots/farms.

☐ Water flows into the main canal then to the smaller canals/plots of land by gravity.

☐ The plots of land get flooded in readiness for paddy rice cultivation.

☐ Fertilizers application takes place to upscale soil drainage and fertility. *5 marks*

10

a) What is drought?

☐ Drought is the drops of precipitation significantly below normal levels. **(1 x 2 = 2mks) b) Explain five negative effects of drought.**

☐ Reduced agricultural production due to low precipitation/soil erosion leading to a weak economy/loss food supply/causes famine.

☐ The displacement of people who will be a burden to maintain in the new areas of settlement.

☐ The loss of species/biodiversity which will limit scientific research.

☐ The migration of wild animals which will mark the collapse of the tourist industry.

☐ Increased health and hygienic risks which cause death/poor health due to inhalation of dusty air particles.

☐ Increased conflicts by communities over resources such as water, fertile land resulting into death.

☐ Increased poverty which will lead to low standard of living of the people.

☐ The collapse of forest related industries due to the loss of trees.

☐ Reduced fisheries which will lead to low fish harvests. **(Any 5 x 2 = 10mks) i) Name four main types of waste they came up with after the field study.** ☐ Electronic waste/E - waste.

☐ Household waste.

☐ Industrial waste.

☐ Biomedical/clinical waste.

☐ Commercial/Business waste.

☐ Agricultural waste.

☐ Construction/Demolition waste.

☐ Sewage/sludge. **(Any 4 x 1 = 4mks)**

ii) Suggest three ways by which wastes within Kisumu can be managed.

☐ By recycling waste so as to produce useful products to the people.

☐ By encouraging non-governmental organizations to play a key rule in waste collection and transformation into useful products.

☐ By awareness creation on the significance of sound waste management practices by urban populace.

☐ By penalizing severely those companies/

☐ individuals/firms which flout waste management legislation.

☐ By reducing the use of products which once quickly disposed off raise the scale of waste accumulation in the town.

☐ By raising certain products which lessen the chances of heightening the scale of waste spread in the town.

☐ By asking local companies/firms/county government to thoroughly treat waste prior to disposing it off to the local surroundings.

☐ By placing many wastes collection bins to reduce the haphazard manner of disposal which makes the town to be insight.

☐ To discourage the use of plastic bags which are non-biodegradable and thus a serious pollutant of the land.

(Any 5 x 1 = 5mks)

(iii)

☐ Observation.

☐ Collecting samples.

☐ Taking photographs/video taping.

☐ Administration of questionnaire.

☐ Interviewing.

☐ Content analysis. **(Any 4 x 1 = 4mks)**

KIMA FORM 4 JOINT EXAMINATION
*Kenya Certificate of Secondary Education*
 312/1
GEOGRAPHY
Paper 1
July/August 2015

SECTION A :
Answer all the questions in this section
1.   a)   Name and describe two types of environment.   (2 marks)
    b)   The diagram below shows a movement of the earth
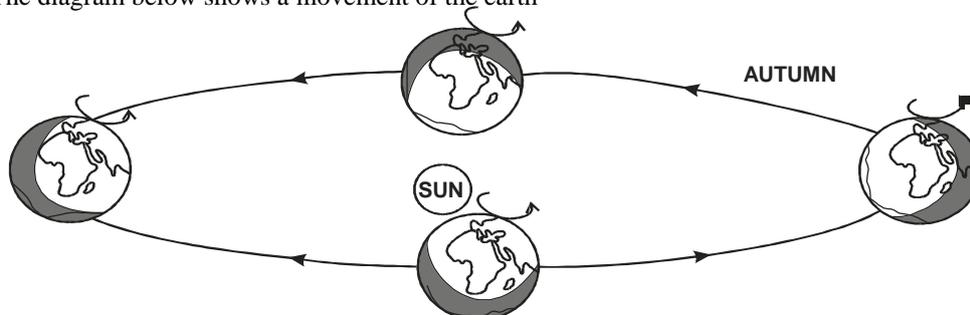
i)   Identify the movement   (1 mark)
ii)   State two effects of the above movement.   (2 marks) 2.   a)
                State two effects of aridity and desertification.   (2 marks)   b) Give three indicators of climate change.   (3 marks)
3.   a)   Name the instrument used to measure sunshine.   (1 mark)
        b) State four factors that determine the amount of solar radiation reaching the earth"s surface.   (4 marks)
4.   a) Name two types of glaciers.   (4 marks) b) Describe how ice moves by plastic flowage.   (3 marks)
5.   a)   State three factors affecting occurrence of underground water.   (3 marks)
        b) State two ways in which underground water is important to humankind.   (2 marks)
SECTION B :
Answer question 6 and any other two questions from this section.
6.   Study the map of Karatina 1 : 50,000 (sheet 121/3) provided and answer the following questions.
        a)   i) What is the title of the map extract ?   (1 mark) ii) Give the name of the map extract bordering Karatina to the East.   (1 mark)
        b)   i)   Name two human features in grid square 0346.   (2 marks)
                ii)   What is the bearing of the air photo principal point in grid square 9452 (13A/13) from the trigonometric station
        in grid square 9552 (121T7)   (2 marks)   **c)**
         Calculate the area of the natural forest in Kirinyaga District.   (2 marks)
        e)   i)   Using a scale of 1cm to represent 20 metres, draw an accurate cross section from grid square 850570 to grid square 910570.   (3 marks)
                ii)   On the cross-section mark and name :
   - Forest   (1 mark)   - River   (1 mark) iii) Determine the indivisibility between the two end points.   (1 mark)
        f)   Describe the drainage of the area in the map extract.   (5 marks)
        g)   Students of a school at Ragati went for a field study in Karatina township.
                i)   Name two types of settlement patterns they may have identified in the town.   (2 marks)   ii)   State four solutions to problems they may have encountered during the field study.   (4 marks) **7.**   The diagram below shows some features formed as a result of faulting process.
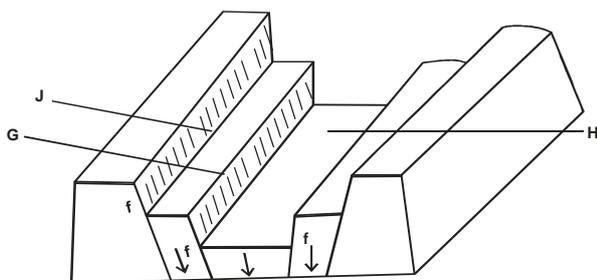
a) Name the features marked G, H and J. (3 marks)
b) With the aid of well labelled diagrams, describe the formation of the Rift Valley by anticlinal arching. (8 marks)
c) State five negative effects of faulting on the human environment. (5 marks)
d) Suppose you carried out a field study in an area affected by faulting.
    i) Apart from the Rift Valley, name three other features that you are likely to identify. (3 marks)
    ii) Explain three economic benefits of faulting you are likely to identify. (6 marks)

8. **a)** List
    i) Four characteristics of desert soil. (4 marks)
    ii) Two factors that contribute to soil leaching. (2 marks)
    b) Explain how each of the following factors influence the formation of soil.
    i) Parent rock (2 marks) ii) Living organisms (2 marks) iii) Topography (2 marks)
    c) Draw a well labelled diagram of a soil profile of a mature soil. (5 marks)
d) Explain four ways in which human activities contribute to soil erosion. (8 marks)
9. **a)** i) What is a rock ? (2 marks) ii) Describe the three ways through which sedimentary rocks are formed. (6 marks)
    b) Describe two processes through which sedimentary rocks change into metamorphic rocks. (4 marks)
    c) Give an example of each of the following types of igneous rocks
        i) Plutonic rocks (1 mark) ii) Hypabyssal rocks (1 mark) iii) Volcano rocks (1 mark)
    d) Explain the significance of rocks to the economy of Kenya under the following sub-headings.
        i) Tourism (2 marks) ii) Energy (2 marks) iii) Water (2 marks)
    e) You intend to carry out a field study of rocks within the vicinity of your school.
        i) Name two secondary source of information you would use to prepare for the field study. (2 marks)
        ii) State two activities you would be involved in during the field study. (2 marks)
10. **a)** i) Name two types of river erosion. (2 marks)
        ii) State three factors influencing the rate of river erosion. (3 marks)
    b) Name and describe three ways by which a river transports its load. (6 marks)
    c) i) Apart from deltas, give two river depositional features. (2 marks)
        ii) Giving an example from Kenya, describe the formation of acute delta. (3 marks)
    d) Describe the formation of the following river patterns :
        i) Dendritic pattern (3 marks) ii) Centripetal pattern (3 marks) **e)** State three positive significance of rivers. (3 marks) **KIMA FORM 4 JOINT EXAMINATION**
Kenya Certificate of Secondary Education
312/2
GEOGRAPHY
Paper 2
July/August 2015

SECTION A :
Answer all the questions in this section.
1. **a)** Give the relationship between Geography and Agriculture. (2 marks)
b) State three significance of learning Geography. (3 marks) **2.** **a)** Differentiate between fertility and fecundity. (2 marks) **b)** State three effects of an ageing population in development. (3 marks)
3. **a)** What is fish farming ? (2 marks)
b) Mention three measures taken by the government to encourage fish farming. (3 marks) **4.** **a)** State three main characteristics of minerals. (3 marks) **b)** Mention two areas where diamond is mined in Tanzania. (2 marks)

5. **a)** Use the map of Kenya below to answer question that follow.
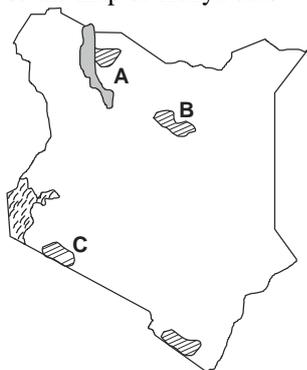
Name :

    i)   the game reserve marked C   (1 mark)

    ii)   The national park marked A and B (2 marks)

b) State two problems experienced by the Kenya government in the efforts to conserve wildlife.   (2 marks)

SECTION B :

Answer question 6 and any other two questions from this section.

6. The table below shows some of Kenya"s imports and exports in tonnes in 1999. Use the data to answer the questions that follow.

Imports in tonne		Exports in tonnes	
Sugar	99,000	Coffee	316,000
Iron and steel	300,000	Tea	159,000
Fertilizer	84,000	Maize	259,000
Wheat	125,000	Cement	225,000
Total	608,000		959,000

a)   i) Draw a divided rectangle measuring 15cm long to represent the data on exports. (8 marks) ii) Calculate the trade deficit in Kenya.   (2 marks)

b)   Explain how the following conditions can affect the internal trade of Kenya.

    i)   Poor infrastructure

    ii)   Poverty among people   (4 marks) **c)** Explain three measures taken by the Kenyan government to reduce unfavourable balance of trade. (6 marks)

d) State five ways in which Kenya is likely to benefit the renewed East African cooperation.   (5 marks) **7.**

a) i)   Apart from water and air pollution, name two other types of pollution.   (2 marks)   ii) Identify three ways in through which water is polluted.   (3 marks)   iii) Explain three effects of air pollution on the environment.   (6 marks) **b)** Explain three factors that led to frequent flooding in the lake region of Kenya.   (6 marks)

c)   Explain two ways through which floods can be is controlled in the lake region of Kenya.   (4 marks)

d)   State four effects of wind as an environmental hazard in Kenya.   (4 marks) **8.**

a) i)   Give the meaning of horticulture farming and market gardening.   (2 marks)   ii)   State five characteristics that distinguish horticulture from other types of crop farming.   (5 marks)   **b)** Give three similarities and three differences of horticulture farming in Kenya and in Netherlands.   (3 marks)

c)   Name one horticultural product exported in largest amount from each of the following Kenyan regions :   (3 marks)

    i)   Naivasha ii) Kericho iii) Kirinyaga

d) i)   Name any two producers or processors of dairy products in Kenya.   (2 marks)

    ii)   Describe the ways in which the Kenyan government has made effort to solve problems that face dairy farmers

        in Kenya.   (7 marks)

9. The diagram below is that of Great lakes and St.Lawrence seaway. Use it to answer question a (i) and (ii)
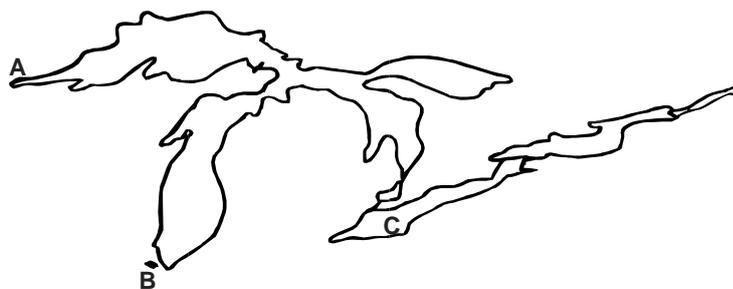
a) i) Name the ports marked A and B (2 marks)

ii) Name the lake marked C (1 mark)

b) Explain four ways in which the Great lakes and St.Lawrence seaway has benefited the economies of USA and Canada. (8 marks) c) i) State four reasons why pipeline is the preferred means of transporting fluids. (4 marks) ii) Identify four causes of road accidents in Kenya. (4 marks) d) Explain three factors that account for the popularity of containerization at the port of Mombasa. (6 marks) 10. a) i) What is reafforestation ? (2 marks)

ii) State four reasons why afforestation should be encouraged in Kenya. (4 marks)

b) i) Name two main exotic softwood trees grown in Kenya. (2 marks) ii) State five characteristics of softwood forests in Canada. (5 marks) c) Explain three problems which hinder the Kenya government effort to manage and conserve her forests. (6 marks)

d) Compare forestry in Kenya and Canada under the following sub-headings:

i) Transportation of the logs (2 marks) ii) Felling trees (2 marks) iii) Tree species (2 marks) **KIMA JOINT EVALUATION 2015**

KENYA CERTIFICATE OF SECONDARY EDUCATION (K.C.S.E)

MARKING SCHEME

Geography (312/1)

July/August 2015

SECTION A

Answer ALL the questions in this section

1

a) Name and describe two types of environment. (2mks)

☐ Physical environment - includes the natural physical conditions of weather, soil, etc - human environment - comprises human activities like mining.
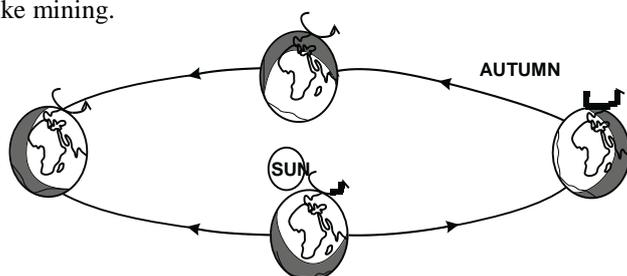
b) The diagram below shows a movement of the earth.

☐ Identify the movement.

☐ Earth revolution. (1mk)

ii) State two effects of the above movement

☐ It causes the four seasons namely Summer, Autumn, Winter and Spring.

☐ It causes varying lengths of day and night at different times of the year.

☐ It causes changes in the position of the midday sun at different times of the year.

☐ It cause lunar eclipse.

2

a) State two effects of aridity and desertification (2mks)

☐ Can lead to development of infertile soils thus low productivity.

☐ Reduced Agricultural practices that lowers food production. b) Give three indicators of climate change (3mks) ☐ Increased soil erosion.

☐ Migration of people to more productive areas in search of food and pasture.

- Strong winds.
- Low levels of development due to less economic productivity.

3

a)   Campbell stokes/sunshine recorder.

b)

- The transparency of the atmosphere/amount of cloud cover.
- The intensity of sun"s radiation in space and the earth"s average distance from the sun. Position of the earth on its obit which produces different seasons.   The angle of the surface on which the sun"s rays fall.
- The area and nature of the surface on which the sun"s rays fall.

4

a) Valley glacier.

Ice sheet.

Piedmont glacier. b)

- Ice accumulation results to pressure at the bottom, side and middle of ice mass.
- Weight and pressure leads to particles melting and due to low temperatures freezing occurs immediately leading to freeze - thaw action.
- The freezing and thawing leads to inter-granular shipping movement in whole ice mass gradually moves down slope.

(Any 3 x 1 =3mks)

5)   State three factors influencing occurrence of underground water.

- Porosity of the rocks.
- Permeability of the rock.
- The nature of the rock.
- Level of saturation of the land.
- Water loss through evaporation.
- Vegetation cover.
- Amount of perception.   (Any 3 x 1 = 3mks)

b)   State two ways in which underground water is important to

man.   Provide side for settlements e.g spray

- Water from the wells was for irrigation.
- Spring form sand of water for domestic/industry ore.
- Spring are source of various rivers especially on Kenya highland.
- Hot springs & geyser form burnt off ruche.
- They are tapped for geothermal power.   (Any 2 x 1 = 2mks)   **SECTION B**

Answer question 6 and any other questions from this section.

6.   Study the map of Karatina 1:50,000 (sheet 121/3) provided and answer the following questions.

a   (i) What is the title of the map extract?

-    Kenya 1:50,000   (1mk)

ii)   Give the name of the map extract bordering Karatina to the east.

-    Kerugoya (1214)   (1mk) b (i) Name

two human features in grid square 0346.

- Huts/houses/settlements.
- School.
- Slaughter house.
- Foot path.   (2mks)

ii)   What is the bearing of the Air photo principal point in grid square 9452 (13A/13) from the trigonometric

station   in grid square 9552 (121T7)

-    283 + 1 (282º, 283º , 284º)   (2mks)

c)   Calculate the area of the natural forest in Kirinyaga District.

- No of complete grids   8
- No of incomplete grids 4/2 = 21/30km.   (2mks)

d (i) Using a scale of 1cm to represent 20 meters, draw an accurate cross section from grid square 850570to grid square   910570. (3mks)

ii)   On the cross section mark and name;

- Forest   (1mk)
- River   (1mk)

iii)   Determine indivisibility between the two end points (1mk)

The two end points are not invisible.

e)   Describe the drainage of the area in the map extract. (5mks)
☐   They are numerous permanent rivers in area covered by the
map.
☐   Presence of water reservoirs e.g along R. Sagana.
☐   The rivers generally flow north to Southern part of the mapped area.
☐   Most rivers depict a dendritic drainage patter.
☐   Presence of papyrus swamp in the Southern part of the area covered by the map. f)   Students of a school at Ragati went or a field study in Karatina Township.
         i)   Name two types of settlement patterns they may have identified in the town.(2mks) ☐   Nucleated settlement pattern.
☐   Linear settlement pattern.
         ii)   State four solution to problems they may have encountered during the field study.(4mks) ☐   The use of an interpreter to solve the problem of language barrier.
☐   Asking for assistance from well developed learning institutions for some shortage.
☐   The use of sport shoes to overcome the problem of the study being tedious.
☐   The used of sampling technique to be able to complete the field work exercise.
☐   Improvisation.
7.   Features marked G, J, K. (3mks)
         G   -   fault scarp.
         J   -
fault step.   K   -
rift valley.
b)   With the aid of well-labelled diagrams, describe the formation of the Rift Valley by anticlinal arching .
-   Vertical forces push the earth"s crust upward.
         upward bend/anticline.
-   A lot of stress is created at the crest of the anticline, making it to crack. -
         The huge crack   formed
becomes the Rift   valley.
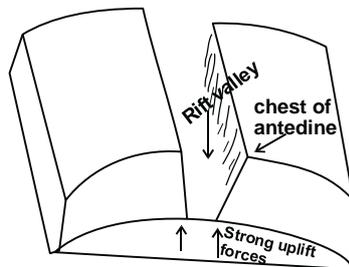
c)

c)   Negative effects of faulting on the human
environment. ☐   Destruction of property in settled areas.
☐   Destruction of railways, roads, pipelines etc.
☐   Fault scarps make it difficult and expensive to construct roads, railway through the slope.
☐   Loss of life in densely settled areas e.g town.
☐   Disappearance of rivers into a fault may lead to shortage of water for domestic use. d   (i) Apart from the Rift Valley, name three other features they are likely to identify. ☐   Fault scarp.
☐   Tilt blocks.
☐   Fault blocks.
☐   Horst blocks.
☐   Fault step   ii) Explain three economic benefit of faulting they are likely to identify.
☐   Lakes associated with faulting are good fishing grounds, mining etc.
☐   Hot water coming through faults are utilized to produce geothermal power.
☐   Scarp springs on the foot of scarps provide water for domestic use.
☐   Features associated with faulting form beautiful scenery for both local and foreign tourists, hence foreign exchange.

- Rivers on fault scarps provide water for domestic, irrigation and HEP generation.
- Faulting expose minerals which have been mined.   (Any 3 x 2 = 6mks)

8
a   (i)
- They are thin/shallow.
- They are stony/sandy.
- They are saline.
- They are loose in texture.
- They are rich in calcium.
- Low moisture content   (4 x 1 = 4mks)   ii)
- The soil/solubility of the minerals.
- Slope b (i) Parent rock
- The nature of the rock influences the rate of weathering/hard rock weather slowly while soft rock weathers fast.
- The rock determine the soil texture/large grained soils.
- The type of minerals in the parent rock are transferred to the soil during formation.   (2 x 1 = 2mks)   ii) Living organisms
- They assist in the breaking down of rock through burrowing/ploughing/root penetration.
- They influence the chemical composition of soil by adding/removing organic acid solution/minerals.
- Burrowing/digging influences soil aeration.   (2 x 1 = 2mks)   iii) Topography
- It determines the rate of weathering/steep slopes encourage high rate of weathering and removal of soil particles.
- It influences soil depth/gentle slopes have deep soil while steep slopes have thin soils. ☐   It influences soil drainage/where land is flat, soil are poorly drained.   (2 marks) c)   A soil profile

Humus

Horizon A (top soil)

Horizon B(sub soil)

Horizon C (partly weathered soil with large rock psrticles
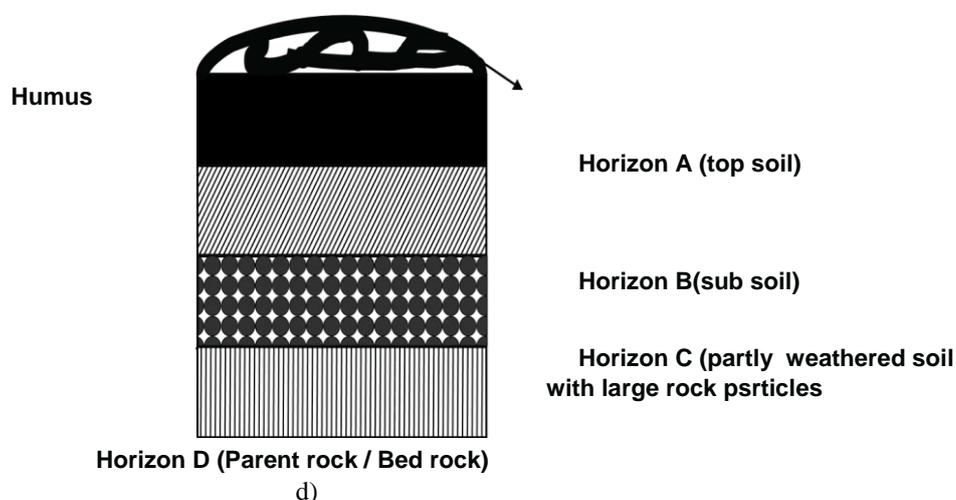
Horizon D (Parent rock / Bed rock)
                         d)
- Mono cultural/farming activities leads to soil exhaustion thus making the soil vulnerable to erosion.
- Overstocking reduces vegetation cover, exposing soil to agents of erosion. ☐   Ploughing up and down a slope provides channels for surface run off.
- These are enlarged to become gullies.
- Deforestation/clearing of vegetation cover exposes soil to agent of erosion.
- Mining/quarrying/road construction loosen/exposes the soil making it susceptible to erosion.
- Human settlement and cultivation on steep slope/river frontage increases soil erosion processes.
- Continues cultivation without replenishment of soil exhaustion making the soil vulnerable to erosion. ☐   Shifting cultivation/bush fallowing leaves land unprotected against erosion.   (Any 4 x 2 = 8mks)

9
a) (i) What is a rock?
- A rock is an aggregate of mineral particles cemented together and form the solid part of the earth"s crust.
      ii) Describe three ways through which sedimentary rocks are formed.
- Mechanically formed - formed when eroded rock materials are transported by agents of erosion and deposited in layers either on land or in the sea.   (2mks)
- Organically formed - formed when remains of previously existing plants/animal organisms are accumulated over along period of time forming layers.   (2 marks)

☐ Chemically formed - formed when rocks are precipitated or when solutions of salts evaporates and particles accumulate in layers.

b) <u>Describe two processes through which sedimentary rocks change into metamorphic rocks.</u>

☐ When the weight of the overlying rock layers create pressure on the lower layer, it lead to change in structure/grain alignment of the rocks = dynamic metamorphism.

☐ During volcanic eruptions, hot magma/liquids/gases may intrude into a sedimentary rock. The rock grams will re crystallize due to heat to form new minerals = thermal/contact metamorphism.

☐ In the mountain building process, sedimentary rocks are compressed and due to this pressure, heat is generated. This heat modifies the structure of the original rocks = thermal - dynamic metamorphism.

c)   <u>Give two examples of each of the following type of igneous rock.</u>
    <u>Examples of each of the following igneous rock.</u>
    <u>Photonic rocks</u>

☐ Peridodite

☐ Granite

☐ Gabbros

☐ diorite ☐   Syronite
    <u>Hypabyssal rocks</u>

☐ Diabase

☐ Lamprophyre

☐ dolorite

☐ Porphyry ☐ Pophyrite
    <u>Volcanic rocks</u>

☐ Basal - scoria

☐ Andestite - obsidian

☐ Ryolite - phornolite

☐ Pumice

d

☐ <u>Tourism</u> - Some rocks form unique features that attract tourists earning the country foreign exchange.

☐ Energy - Some sedimentary rocks contain fossils fuels which are sources of energy for domestic/industrial use.

☐ Water - Some rock act as storage for water which can be supplied for domestic/industrial/farming. e)   <u>You intend to carry out a field study of rocks within the vicinity of your school.</u>

i)   <u>Name three secondary sources of information you would use to prepare for the field</u>
<u>study</u>. ☐ Textbook/pamphlet/journals/periodical/Newspapers/magazine.

☐ Biological maps/maps.

☐ Tape recorded information.

☐ Photographs/pictures/Video tapes/film.   (Any 2 x 1 = 2mks) ii) <u>State four activities you would be involved in during the field study.</u>

☐ Drawing of sketches/maps.

☐ Observation.

☐ Taking photograph.

☐ Studying geological maps.

☐ Making notes.

☐ Tape recording.

☐ Collecting rock sample.

☐ Asking/answering question. ☐ Breaking rocks.

☐ Filling in questions.

☐ Digging to access rocks.   (Any 2 x 1 = 2mks)

10

a) (i)<u>Name two types of river erosion (2mks)</u> ☐
Headward erosion.

☐ Vertical erosion.

☐ Lateral erosion.   ii) <u>State three factors influencing the rate of river erosion (3mks)</u>

☐ Large volume of water leads to a high rate of river erosion than a small volume of water.

- Steep gradient leads to high speed which enhances high rate of erosion.
- Less resistant bedrock is easily eroded than a more resistant rock on the river bed.
- Large and more resistant local encourages erosion than small and less resistant load. b) <u>Name and describe three way by which a river transports its load (6mks)</u> □   Suspension - Light load is carried a float.
- Siltation - Materials are lifted in a series of hydraulic lift/short jumps or hops.
- Traction - Heavy load are pushed and rolled along the river bed by the force of water.
- Solution - Mineral salts dissolved in water and carried farthest.

c) (i) <u>Apart from deltas, give two river   aA depositional features. (2mks)</u>

- Alluvial fans.   -   River braids.
- Flood plains.   -   Natural levees.
- Meanders.   -   Deferred tributaries.
- Ox-bow lakes.   -   Distributaries.

ii) <u>Giving an example from Kenya, describe the formation of actuate delta.</u>

(3mks) □   When a river deposits coarse seed.

- Strong currents form the sea spread the materials over a wide area on the seaward side.
- The river divides into several channels/distributaries e.g R. Tana and R. Sondu. d) <u>Describe the formation of the following river patterns;</u>

i)   <u>Dendritic pattern (3mks)</u>

- Resembles a tree truck with its branches.
- Tributaries join the main river at acute angles.
- Confluences form accordant junctions.
- Drainage pattern forms in areas where rocks are of uniform structure and resistance/homogenous rocks.
- Direction of flow is governed by direction of slope. ii) <u>Centripetal pattern (3mks)</u>
- Made up of rivers flowing into a common inland basin or depression like a lake/sea/swamp.
- The depression is an area of inland drainage.
- Pattern is guided by slope.

e)   <u>State three positive significance of rivers (3mks)</u>

- River water is used for both domestic and industrial purposes.
- Rivers with flesh water are used for irrigation.
- Navigable rivers are used as transportation routes.
- Some rivers provide port facilities especially in their raise and estuaries e.g R. Mwachi. □   Some rivers are rich as fishing grounds Dammed rivers are sued for generation of HEP.
- River beds and valleys are sources of building materials like gravel, pebbles and sand.
- Some alluvial sediments may contain valuable minerals like gold, diamond e.t.c.
- Features formed by rivers, e.g waterfalls, gorges etc attract tourists who bring foreign exchange for developing others sectors of the economy.
- During flooding, fertile alluvial deposits may provide for fertile soils for agriculture. □   Some rivers form natural boundaries between administrative divisions like countries.

KIMA JOINT EVALUATION 2015
KENYA CERTIFICATE OF SECONDARY EDUCATION (K.C.S.E)
MARKING SCHEME
Geography (312/2)
SECTION A

1
a)   <u>Agriculture</u> is the cultivation of crops and rearing of livestock.
<u>Geography</u> study farming systems, their distribution and the factors affecting farming activities.   (2mks) b)
<u>3 significance of learning geography.</u>

- Geography helps learners to develop skills used to study the environment.
- It teaches methods of collecting and representing geographical information.
- It enables the learner to understand and appreciate different environmental influence.
- It encourages international awareness and co-operation.
- Geography teaches how to manage time properly.

- It is a fool of productive citizenship.
- It is a career subject.
- Helps to acquire positive attitudes and values in society.   (Any 3 x 1 = 3mks)

2

a)   Fertility is the ability to reproduce/conceive whereas fecundity refers to the ability to give birth to many children. b)

- Leads to low labour supply, hence costly labour imports.
- Dependency of old leads to drain on the government resources/to provide pension schemes.
- Existence of small skilled labour force of experienced people which is expensive to hire and sustain.
- Low demand for goods for children/youths hence reduced markets.
- Improved living standards as pressure on resources reduces.
- Low rates of innovation and resistance to change by the old generations.   (First 3 x 1 = 3mks)

3

a)   What is fish farming (2mks)

- This is the rearing of fish in ponds/artificial waters.

b) Mention 3 measures taken by the government to encourage fish farming (3mks) ☐ Giving advice to fish farmers through field extension officers.

- The fisheries department encourages more individual farmers to establish fishponds.
- The fisheries department also assists farmers by offering technical aid and financial assistance.
- Dissemination of information to communities in line with the government food policy.
- Establishment of demonstration farms consisting of fishpond and hatchments by the lake basin development authority.

4

a)   State 3 main characteristics of minerals.(3mks) ☐   Chemical composition.

- Hardness.
- Crystal shape   .
- Specific gravity.
- Colour.
- Transparency.
- Texture.
- Lustre.
- Cleavage.
- Fracture.
- Streak.
- Tenancy.
- Taste.
- Attraction of magnets.

b) Mention two areas where diamond is mined in Tanzania. (2mks) ☐ Mwadui.

- Shinganga.

5

a)   (i) C - Maasai Mara Game Reserve.
          (ii) A - Sibiloi National Park.
B - Marsabit National Park.

b)

- Poaching illegal hunting leads to extinction of wildlife species.
- Pollution leading to death of wildlife. ☐ Frequent fire outbreaks.
- Human - animal conflict.
- Frequent droughts leads to loss of plants and animals.
- Pests like aphids kill some plants.
- Diseases like Nagana kill some animals.
- Rapid population growth leads to encroachment into game parts.

SECTION B

6   **(i)** Coffee $\underline{316,000}$ x 15cm = 4.9
                959,000
       Tea $\underline{159,000}$ x 15cm = 2.5cm
                959,000
       Maize $\underline{259,000}$ x 15cm = 4.1cm
                959,000
       Cement $\underline{225,000}$ x 15cm = 3.5cm
                 959,000

Divided rectangle 15cm long representing data on export.

tea
coffee   **cement**

                maize   (8mks)
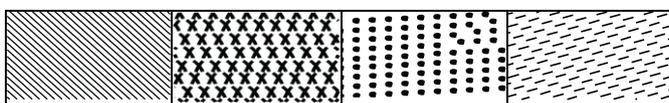
       ii) Trade deficit 959,000 - 608,000 = 351,000 tonn.

b) How the following conditions can affect the internal trade of Kenya.
       i)   Poor infrastructure.
☐   Poor roads discourage movements of goods.
☐   Causes delay in delivery of raw materials.
☐   Spoilage of goods e.g horticulture.   (2mks)   ii) Poverty among people ☐   Low purchasing power.
☐   Only few goods/cheap goods are delivered.
☐   Failure to access loans to invest in trade.   (2mks)
       Three measures taken by the Kenyan Government to reduce the unfavourable balance of trade.
☐   Developing other sources of energy to reduce importation of fuels.
☐   Establishment of import substitution industries to reduce import of commodities.
☐   Encourage the use of local technology e.g Jua kali which does not require import of heavy machinery.
☐   Restrict imports of luxury items through taxation.
☐   Encourage the assembly of machines locally since import of parts is cheaper.
☐   Encourage the exportation of locally manufactured goods.
☐   Increase invisible trade e.g tourism, insurance banking.   (Any 3 x 2 = 6mks)

d) Five ways in which Kenya is likely to benefit from the renewed East African Co-operation.
☐   Improved TIC links between Kenya and other member states facilitate movement of goods and people.
☐   Kenya"s volume of trade will increase because of the expanded trading area.
☐   Easy movement of people across the border enable more tourists to visit Kenya.
☐   Expanded market will attract more foreign investors hence promote industrialisation.
☐   There will be creation of many employment opportunities.
☐   Exportation of goods will increase earning from foreign exchange.
☐   There will be exchange of research findings/training which will help in economic development
☐   There will be mutual political understanding between Kenya and her neighbours.   (5 x 1 = 5mks) 7 (i) Apart from water and air pollution, two other types of pollution.
☐   Land/soil/ground pollution.
☐   Noise/sound pollution.
☐   Thermal pollution.
☐   Radiation pollution.   (Any 2 x 1 = 2mks)   ii) Identify three ways through which water is polluted.
☐   Discharge of industrial waste/oil spillage/dumping of nuclear wastes into water bodies. ☐   Discharge of agricultural chemicals into rivers/lakes by rain water.

- Disposal of domestic wastes into water bodies.
- Discharge of raw sewage into water bodies.
- Bathing in rivers/washing clothes/animal drinking water in rivers.
- Soil erosion.   (Any 3 x 1 = 3mks)

b) Explain three effects of air pollution on the environment.

- Gases emitted from factories contain substance, which roots of houses/mar/structures.
- Some gases from factories dissolve in water to form acid rain which make plants wither/kill animal/corrode root.
- Inhaling smoke and soot port ides lead to discomfort/irritation of the respiratory system.
- Gases/excess CO_2 increase atmospheric temperature affecting climate of the area/depletion of a cone layer.
- Smog reduces visibility which may lead to motor accidents.
- The dust particles can settle on windows in order light penetration. (Any 3 x 2 = 6mks) c) Explain three factors that lead to frequent flooding in the Lake region of Kenya. ☐   Most of the land is low-lying which causes rain water to spread over a wide area.
- The adjacent highland receive torrential rainfall which releases large volumes of water resulting in rivers overflowing their banks.
- Silt has filled the river beds making them shallow thus spilling their waters over the banks.
- The rivers are in their old stage, thus they have wide flood plains which allows water to spread over large area.
- The area has black cotton soil which is non-porous which when socks up allow water to flow and spread on the surface.
- The heavy rainfall received in the area is discharged into L. Victoria making its level to rise thus flooding the adjacent lowland.   (Any 3 x 2 = 6mks) iii) Explain two ways through which floods are controlled in the Lake region of Kenya.
- Several dykes have been constructed/artificial levee/to restrict the rivers within their channel.

 Diversion channel have been constructed in the flood plain and water used for irrigation thus reducing the effects of the excess water.   (Any 2 x 2 = 4mks)

c)   State four effects of wind as an environment hazard in Kenya.

- Strong winds destroy trees/crops.
- Wind blow off root of houses.
- Winds cause strong sea storm/best capsize.
- Winds cause soil erosion.
- Winds spread water borne disease.
- Winds spread bush fire.   (Any 4 x 1 = 4mks)

8

a) i) Meaning of horticulture farming and   market gardening.

- Horticulture farming - intensive cultivation of vegetables, fruits and flowers for both domestic and export market.(1mk)
- Market gardening - intensive cultivation of vegetables and fruits for sale to local market in urban centre.   (1mk)   ii) Characteristics that distinguish horticulture from other types of crop farming.
- Farming must be done where there is well developed transport network since produce is highly perishable.
- Crops grown are mainly flowers, fruit and vegetables.
- Produce is market oriented and mainly for export market.
- Farming is mainly labour intensive since the crops require tender care and close monitoring.
- Farms intensively farmed to ensure high yields per unit area.
- Farm scientifically managed e.g seeds selection, constant spraying against pests and diseases replenishment using fertilizers and manure.
- Use of green house/glass houses and irrigation to regulate required moisture high payment to skilled workers.

                    (5 x 1 = 5mks

b) Similarities of horticulture farming in Kenya and in Netherlands. ☐
Vegetables, fruits and flowers are cultivated in both countries.

- Green houses used in both countries although more in Netherlands.
- Farms scientifically managed in both countries for higher yields of high quality and hygiene.
- Yields highly perishable in both countries leading to good refrigeration and good transport to the market.
- Intensive cultivation carried out in both countries.   (3 x 1 = 3mks)   Differences of horticulture farming in Kenya and in Netherlands.
- Higher demands of horticulture products locally and internationally from Nethelands than from Kenya.
- Netherlands marketing procedure through cooperatives is well organized than in Kenya.

- Horticultural farming related research is more developed in Netherlands than in Kenya.
- Local and abroad market for Netherland centrally located (European market). Some market for Kenya produce is far leading to increased cost for long distance air transport.
- More advanced and appropriate technology applied in Netherlands than in Kenya.
- Netherlands has longer horticultural farming history than Kenya.   (3 x 1 =3 mks) c   i)   Naivasha - flowers
    ii)   Kericho - passion fruits
    iii) Kirinyaga - French beans.   (3mks)

d) i)   <u>Producers/processors of dairy products in Kenya.</u>
- New Kenya Cooperative creameries.
- Brookside.
- Aberdares.
- Limuru dairies.   (2 x 1 = 2mks)
    ii) <u>Ways in which the Kenyan government has made efforts to solve problems faced by dairy farmers.</u>
- Training veterinary doctors and other animals assistants so that they can provide extension services to various region of dairy farming.
- Government carries out research on animal diseases and parasites through KARI and KETRI (Kenya Trypanosomiasis Research Institute)
- Organizes seminars, field days and shows to educate farmers.
- Builds roads in dairy farming regions.
- Advanced loans to dairy farmers through their cooperatives.
- Sets up cooling and processing plants in various parts of the country. □   Helps in establishing cattle dips.
- Helps in coordination of A.I to improve local breeds. (7 x 1 = 7mks)

9)
a)   i)   Port A - Duluth
           Port B - Chicago
           ii) Lake C - L. Erie
b)   <u>Four ways in which the great lakes and St"Lowrence Sea way has benefited the economies of U.S.A and Canada.</u>
- Dams found along the route provide H.E.P for domestic and industrial use
- The seaway/Niagra falls attracts tourists who bring in foreign exchange used to develop other sectors of the economy.
- Has created employment opportunities in the transport sector raising the standards of living of the people in the area.
- Provide cheap means of transport for both imports and exports thus encouraging trade.
- It has led to the growth of ports and towns which have become focal points for economic activities.
- There has been extensive industrials development in the area/growth of Pittsburgh industrial conurbation due to accessibly to the raw materials.
- The country earns revenue from tariffs charged which is used to develop other sectors of the economy.(4 x 2 = 8mks) c) (i) <u>Why pipeline is the preferred means of transporting fluid.</u> □   It ensures constant supply as the low is not affected by delays.
- It"s reliable and convenient especially if the product is highly inflammable. □   Low cost of operating and maintaining pipelines.
- Its un affected by bad weather.
- Its flexible and can be laid on both land and water.
- It does not pollute the environment.   (4 x 1 = 4mks)   ii) <u>Causes of road accidents in Kenya.</u>
- Careless drivers/driving under the influence of alcohol.
- Unqualified drivers on the road.
- Over speeding drivers.
- Bad state of Kenyan roads with several pot - holes.
- Existence of roads with steep gradients and sharp bends.
- Un roadworthy vehicles.

☐ Corrupt traffic officers who fail to enforce traffic rules.   (4 x 1 =4mks) d) <u>Reasons for the use of containers at the port of Mombasa.</u>

☐ Saves time and labour as F cranes and folk lifts are used in loading and offloading E.

☐ Its economical/ in terms of space F/ saves spaces because of their standardized shapes E.

☐ Save and secured E as the containers are sealed at the loading port and only opened at the destination.

☐ Low insurance costs / low freight charges because of low chances of pilferage and theft

☐ Goods are protected from damage by weather as they are sealed in containers. E.   (3 x 2 = 6mks)

10

a) (i) <u>Reafforestation</u>

☐ The planting of trees in areas where forests have been cleared/deforestation has taken place.   (2mks) ii)` <u>Four reasons why a forestation should be encouraged in Kenya.</u>

☐ To ensure continuous supply of wood fuel/timber herbal medicine/raw materials for paper making.

☐ To protect water catchment areas/create micro-climates maintain/hydrological cycle.

☐ To create scenic beauty.

☐ To expand habitat for wildlife/conservation of wildlife.

☐ To create employment opportunities.

☐ To reduce importation of forest products/sore foreign exchange.   (Any 4 x 2 = 4mks) b) i) <u>Two main exotic softwood trees grown in Kenya.</u>

☐ cypress

☐ pines   (Any 2 x 1 =2mks)   ii) <u>State five characteristics of softwood forests in Canada.</u>

☐ Trees are coiled in shape.

☐ Trees occur in pure stands.

☐ Trees are tall.

☐ Trees have straight trunks.

☐ Trees bear cones.

☐ Forests have no undergrowth.

☐ Trees have shallow root.   (Any 5 x 1 = 5mks)

c)   <u>Explain three problem which hinder the Kenyan government"s effort to manage and conserve her forest.</u> ☐   Rapid increase in population has led to encroachment into forest land hence destruction of trees.

☐ Occurrence of forest fires which have led to destruction of large area under forests.

☐ Illegal logging/indiscriminate cutting of trees thereby reducing/ depleting indigenous tree species.

☐ Attacks by pests/diseases lead to destruction of trees.

☐ Some wild animals damage trees through uprooting/trampling debarking.

☐ Prolonged drought leads to drying of some trees.

d) <u>Compare forestry in Kenya and Canada under the following sub-headings.</u>

i)   <u>Transportation of the logs</u>

☐ In Canada, logs are transported using melt water rivers while in Kenya transportation is by road. (1 x 2 = 2mks) ii) <u>Felling trees</u>

☐ In Canada, felling is done in winter while in Kenya felling takes place throughout the year.

☐ in Canada, harvesting is done through clear cutting while in Kenya it is selective logging.

☐ In both countries, commercial logging is mechanized.
        (1 x 2 = 2mks) iii) <u>Tree species</u>

☐ In Canada softwood tree species are indigenous while in Kenya they are both exotic and indigenous

MERU SOUTH FORM FOUR JOINT EXAMINATION
*Kenya Certificate of Secondary Education*
312/1
GEOGRAPHY
Paper 1
July/August 2015

SECTION A
Answer ALL questions in this section
1. The diagram below shows a six's thermometer.
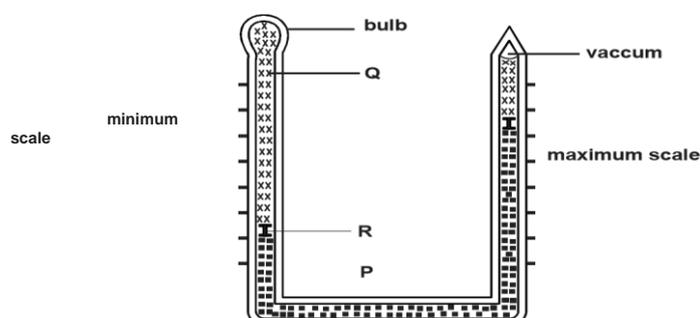
a)   Name the parts marked P, Q and R.   (3 marks)
b)   The table below represents the rainfall and temperatures data of station X   (4 marks)

Month	J	F	M	A	M	J	J	A	S	O	N	D
Temp °C	28.9	29.7	30.3	29.9	29.7	29.2	28.4	28.7	29.6	30.1	29.2	28.7
Rainfall mm	9.0	8.0	21.0	49.0	25.0	9.0	20.0	10.0	4.0	10.0	17.0	11.0

 i) What is the annual range of temperature?   (1 mark)   ii) Calculate the total rainfall of the station.   (1 mark) **2.** a) What is rock metamorphism?   (2 marks) b) Give the examples of chemically formed sedimentary rocks.   (3 marks)
3.   a)   Name the fold mountains found in the following countries
 i) Morocco   ii) Peru
 iii) Switzerland.   (3 marks) b) Apart from fold mountains, name two other features resulting from folding.   (2 marks)
4.   a)   State three causes of soil creep.   (3 marks)
          b)   State two ways in which downwash occurs.   (2 marks) **5.**
    a)   State two causes of chemical soil degeneration.   (2 marks)
          b)   State three factors influencing the formation of soil.   (3 marks)
          SECTION B
          Answer question 6 and any other TWO questions from this section
          Study the map of Migwani 1 : 50,000 (Sheet 151 / 1) provided and answer the following questions.
6.   a)   i)   Give the latitudinal extent of the area covered by the map.   (2
marks)   ii)   What is the bearing of the borehole at grid reference 073698 from the settlement at grid reference 095 731 ?

                                                                                            (2 marks)
          iii)   Measure the distance of the dry weather Road marked D 502 from the drift at grid square 9879 to the Northern
                  end. Give your answer in kilometers.   (2 marks)
          iv)   Calculate the area to the West of the All weather Road loose surface C94. Give your answer in square
                  kilometres.   (2 marks)
b)   i) Using a vertical scale of 1cm to represent 100 metres, draw a cross-section from grid reference 040680 to grid
                  reference 120 680   (4 marks)
          ii)   On it mark and label the following
-          River Ikoo.   (1 mark)

- Road (1 mark)
- Ridge (1 mark)

c) i) Identify two types o vegetation found in the area covered by the map. (2 marks) ii) Citing evidence from the map, state two social functions of GWANI TOWN (2 marks) d) Describe the drainage of the area covered by the map. (5 marks) **7.** a) i) State three types of faults. (3 marks) ii) Explain two processes that may cause faulting. (4 marks) b) i) Apart from the Rift valley, name two other features resulting from faulting. (2 marks) ii) With the aid of diagrams, explain how a Rift valley is formed by tensional forces. (8 marks) c) Explain four positive effects of faulting. (8 marks)

8. a) i) Give three physical factors which contribute to the development of deserts. (3 marks)

ii) Describe two processes of wind transportation. (4 marks) b) State three factors that facilitate wind deposition. (3 marks)

c) By use of diagrams, explain how a rock pedestal is formed. (5 marks)

d) Explain three effects of desert features on human environment. (6 marks) e) Some students carried out a field study in Chalbi desert.

i) State two objectives of their study. (2 marks)

ii) State two problems they encountered during their study. (2 marks)

9. a) Define the following terms

i) Water table. (1 mark) ii) Acquifer (1 mark)

b) Explain how the following factors influence the occurrence of underground water.

i) Nature of the rock. (2 marks) ii) Slope gradient. (2 marks) c) State three conditions necessary for the formation of an artesian well. (3 marks)

d) The diagram below shows the features found in a karst region.
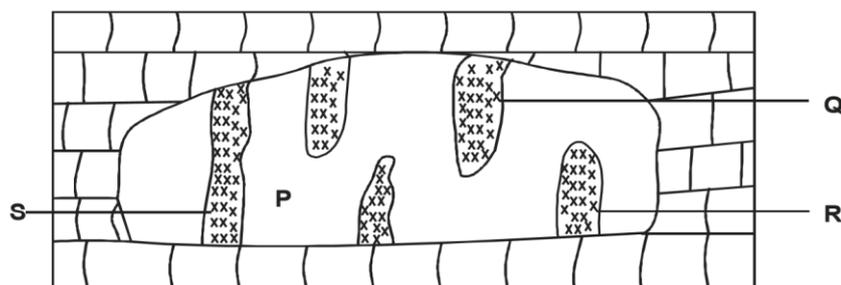
i) Name the features marked P, Q, R and S (4 marks)
ii) Describe how feature S is formed (4 marks) iii) Give three reasons why there are few settlements in the Karst region. (3 marks) e) Students carried out a field study in a karst landscape

i) State two methods they used to record data. (2 marks)

ii) State three importance of studying a karst landscape through field work. (3 marks)

10. a) State three factors that determine the size of a lake. (3 marks)
b) i) Explain three reasons why some Rift valley lakes have fresh water. (6 marks)
ii) Name two corrie lakes in Kenya. (2 marks) c) Explain how the following lakes were formed.
i) Lake Tanganyika. (4 marks) ii) Lake Paradise. (4 marks) d) Explain three negative effects of lakes. (6 marks)

MERU SOUTH FORM FOUR JOINT EXAMINATION

Kenya Certificate of Secondary Education

312/2

GEOGRAPHY

Paper 2

July/August 2015

SECTION A

Answer ALL questions in this section

1. a) Define population (2 marks) b) State the three factors that influence population growth. (3 marks) **2.** a) Name two agricultural non-food manufacturing industries in Kenya. (2 marks) b) Give three benefits derived from Jua Kali sector in Kenya. (3 marks) **3.** a) Differentiate between domestic tourism and international tourism. (2 marks) b) State three inland tourist attractions in Kenya. (3 marks)

4. a) Name the minerals found in the following areas of East Africa

i) Kerio valley (1 mark) ii) Kariandusi (1 mark) iii) Tororo (1 mark)

b) Give two, by products obtained when crude oil is refined.   (2 marks)

5.   a) What is land pollution.   (2 marks) b) State three effects of land pollution on the environment.   (3 marks)

SECTION B - **Answer question 6**

And any OTHER TWO questions in this section.

6.   Study the table below and use it to answer question (a)

Kenya: Leading export crops by value in 2000 (Ksh Million)

Crop	Tea	Horticulture	Unroasted coffee
Exports	35150	21216	11707

    a)   Using a radius of 5cm draw a pie chart to represent the data.   (8 marks)

    b)   State four physical conditions that favour coffee growing in Kenya.   (4 marks)

    c)   Explain favour ways in which the government of Kenya assists small scale coffee farmers. (8 marks)

    d)   Your geography class carried out a field study on a coffee farm near your school.

  i) State two objectives for the study.   (2 marks)   ii) Give three problems you encountered during the study.   (3 marks) **7.** a) Define the term reafforestation.   (2 marks) b) i) State four reasons why it is necessary to carry out afforestation programme. (4 marks)   ii) Give three factors that favour the exploitation of soft wood forest in Kenya.   (3 marks) c) i) State four factors that have led to reduction of area under forest on the slopes of Mt. Kenya. (4 marks)   ii) State four ways in which the clearing of forest has affected the natural environment. (4 marks) d) Explain four factors that limit the exploitation of tropical rainforest in Africa.   (8 marks)

8.   a)   What is a game sanctuary ?   (2 marks)   b) Use the map of Kenya below to answer questions (b)

               Mark and name

 i) Amboseli National park.   (1 mark)   ii) Marsabit game reserve   (1 mark)   iii) Malindi Marine reserve.   (1 mark)

    c)   i)   Give five reasons why Kenya needs to conserve wildlife.   (5 marks)

               ii)   Name three historical sites in the coastal region of Kenya.

       (3 marks)   d) i)   Give five advantages of game ranches in Kenya.

         (5 marks) ii) State three problems posed by wildlife.   (3 marks) e) Outline four wild animals products on which trade ban has been imposed.   (4 marks)

9.   a) i) Define the term transport.   (2 marks) ii) Name three international airports in Kenya.   (3 marks)   iii) State four ways in which Kenya benefits from her international airports. (4 marks) b) Explain four ways in which road transport has been improved in Kenya.   (8 marks)

    c)   State four advantages of railway transport over road transport.   (4 marks)

    d)   Give four reasons why motorcycle transport has become common in most parts of Kenya. (4 marks)

10.   a)   i)   Differentiate between internal and regional trade.   (2 marks)   ii)   Name four major imports to Kenya from the European Union (E.U)   (4 marks) b) State five ways in which trade is of significance to Kenya.   (5 marks)

    c)   Explain four problems facing trade in Kenya.   (8 marks)

    d)   Your class intends to carry out a field study on the Nairobi International Trade fair.

            i)   State three methods you would use to collect data.   (3 marks)   ii)   Give three reasons why a reconnaissance would be necessary.   (3 marks)

MERU SOUTH FORM FOUR JOINT EXAMINATION
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GEOGRAPHY
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Marking Scheme

1.
a) **Name the parts marked**
> P - Mercury
> Q - Alcohol
> R - Metal index   *3 marks*
b) i) **Annual range of temperature**
> 1.9°C   *1 mark*
> ii) **Total annual rainfall of the station**
> 193mm *1 mark*

2.
a) What is rock metamorphism
- It is the change that occur when pre-existing rocks (sedimentary, igneous) are subjected to heat, pressure or both heat and pressure.   *2 marks*

b) Three examples of chemically formed sedimentary rocks
☐ Travertine / Tufa
☐ Dolomite / dolostone
☐ Trona
☐ Gypsum
☐ Rock salt
☐ Limonite
☐ Haematite
☐ Flint /chert *3 marks*

3.
a) **Fold mountains found in**
i) Morocco - Atlas   ii) Peru - Andes   iii)
Switzerland - Alps *3 marks*

b) **Two other features resulting from folding.**
☐ Synclinal valleys
☐ Rolling plains
☐ Ridges
☐ Intermontane plateaus ☐ Intermontane basins. *2 marks*

4.
a) Three causes of soil creep o   Temperature change causes soil particles to expand and contract making them to
shift their position downslope.
o   Moisture/rainwater causes soil to become wet and compact on drying the particles loosen and may shift their position downslope.
o   Human activities and action of burrowing animals may cause the removal of soil on the lower part of the slope. This trigger soil from upper part of the slope which may be shift downslope
o   Freezing of soil water expand the spaces between soil particles. The water thaws and particles fall by gravity and may shift position downslope.
o   Moisture act as a lubricant to soil particles causing their movement downslope.
o   External forces such as moving vehicles / earth tremors have a trigger effect which causes downward movement of soil particles. $1 \times 3 = 3 marks$

b) Two ways in which downwash occur
- Sheet wash

☐

☐

☐
- Gullying   *2 marks*

5.

a) Two causes of chemical soil degeneration

☐   Poor land use practices like monoculture / overcropping.

☐   Wrong application of fertilizer degrade soils causing acidity.

☐   Leaching caused by heavy rainfall

☐   Excessive drought cause accumulation of salt on the top soil   *any 2 × 1 = 2 marks* **b) Three factors influencing soil formation** Climate / rainfall / temperature / wind. Parent rock Topography

☐   Living organisms

☐   Time   *any 3 × 1 = 3 marks*

SECTION B

6.   Migwani map 1 : 50,000 sheet 151/1

a)   i)   Latitudinal extent of the area covered by the map
                    1°03'S to 1°15'S *2 marks*

      ii)   Bearing of the borehole at Grid reference 073698 from the settlement at grid reference 095731
                    213°±1° (212°-214°)   *2 marks*

      iii)   The distance of dry weather road number D502 from the Drift at grid square 9879 to its northern end
                    5.3km ± 0.1 (5.2km - 5.4km)

      iv)   The area to the west of all weather road loose surface number C94
                    10.5km² ± 0.5 (10km² -11km²) *2 marks*

b)   i)   A cross section from grid reference 040680 to grid reference 120680 (4 mks)
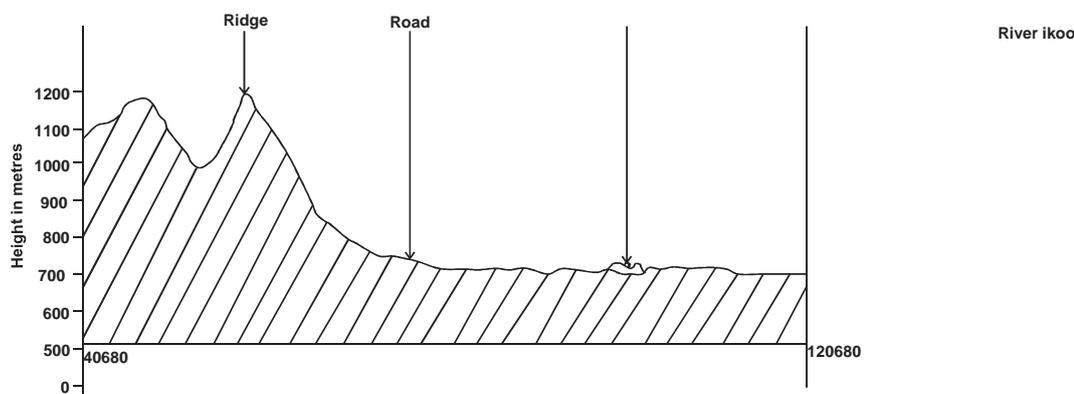
c)   **i)   Two types of vegetation found in the area covered by the map.**
             ☐   Scrub vegetation
             ☐   Scattered trees   *2 marks*   **ii) Two social functions of Gwani town**

Function	Evidence
☐ Education centre	School
☐ Administration centre	Chiefs office/court house
☐ Health services	Health centre
☐ Residential centre	Rest house

                                        NB - No evidence no mark
                                        any 2 × 1 = 2 marks

d)   **Describe the drainage of the area covered by the map**

☐   There are rivers

☐   The rivers are many

☐   The rivers are permanent

☐   There are disappearing rivers around Mtito

☐   The main river is R. Ikoo

-
- Some rivers are Originating from the hills
- Many rivers form dendritic drainage pattern
- Some rivers form parallel drainage pattern
- There are reservoirs
- R. Ikoo is flowing from North West to South Eastwards. *any 6 × 1 = 6 marks* **7.**

a) i) Three types of faults

- Normal fault
- Reverse fault
- Shear/tear/transform fault
- Thrust fault
- Anticlinal fault *any 3 × 1 = 3 marks* **ii) Explain two processes that may cause faulting**
- Faulting may be caused by forces acting horizontally away from each other which causes tension on crustal rocks.
- Due to tension rocks stretch and fracture causing faults.
- Faulting may be caused by forces acting horizontally towards each other which causes compression in crustal rocks.
- Due to compressional force the rocks shorten and fracture causing faults.
- Faulting may occur where horizontal forces act parallel to each other in the opposite or same direction resulting to shearing. Faulting may occur due to vertical movements which may exert a strain in the rocks making them to fracture / regional upwarping. *any 2 × 2 = 4 marks*

b) i) **Two other features resulting from faulting**

- Fault scarp / escarpment / fault step.
- Tilt blocks
- Harst / block mountains *any 2 × 1 = 2 marks*

    ii) **Explain how the Rift valley is formed by tensional forces**

- Layers of rocks are subjected to tensional forces
- Lines of weakness occur leading to development of normal faults.
- The central block sinks or subsides as side blocks are pulled apart
- The sunken part forms a depression or graben called Rift valley

-
-
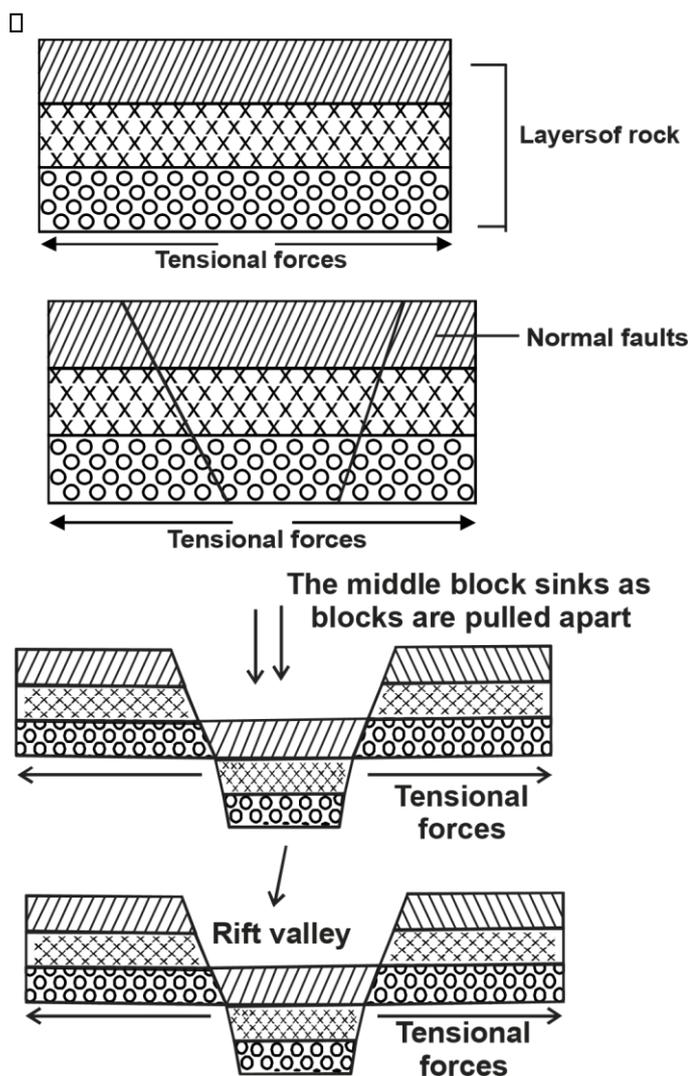
c)   **Explain four positive effects of faulting**

☐   Faulting leads to formation of features that provide beautiful scenery which attract tourists.

☐   Faulting lead to formation of lakes that are important fishing grounds / mining sites / provide water for irrigation / domestic / industrial use.

☐   Faulting causes displacement of rocks which exposes minerals that are mined.

☐   Faulting causes formation of mountains /horst which attract rainfall that give rise to rivers which provide water for industrial / domestic/agricultural / production of HEP.

☐   Block mountains formed through faulting on the windward side which favours agriculture settlement / forest.

☐   When faulting occur across a ridge it may provide a dip which could form a mountain pass where transport and communication lines can be constructed.

☐   Springs that occur at the foot of fault scarps attract settlement.

☐   Faulting create deep faults that can be utilized for Geothermal power.

☐   Rivers flowing over fault scarps may farm waterfalls which may be harnessed for HEP generation.   *any 4 × 2 = 8 marks*
     8. a)   i) **Three physical factors which contribute to the development of deserts.** Insufficient rainfall which doesn't support luxuriant growth of vegetation.
     High temperature / very low temperature lead to aridity due to little precipitation / drought.
     Relief barrier / rain shadow effect.

☐   Influence of wind system

☐   Cold ocean currents

☐   Continentality   *any 3 × 1 = 3 marks*   ii)   **Describe two processes of wind transportation**

☐   *Saltation*
     This is where coarse grained sand particles are transported through a series of bouncing / jumping along the surface.

- ☐
- ☐ *Suspension*

  It is where very fine materials is picked by wind raised high and blown over long distances.
- ☐ *Surface creep / rolling.*

  It is where large / heavy materials are rolled / pushed forward by wind along the surface. *any 2 × 2 = 4 marks* b)

i) Three factors that facilitate wind deposition

- ☐ Desert surface with water surfaces or moist grounds forces the wind to deposit its load.
- ☐ Obstacles - presence of obstacles like rocks, bushes on the path of wind forces the wind to drop some of its load.
- ☐ Strength of the wind - when the wind slakens it begin to drop some of its load / collision of wind blowing from different directions cause wind to drop some load.
- ☐ When sudden showers start falling in the desert some of the suspended materials in the air are washed down.
- ☐ If the wind is carrying too many particles they constantly collide causing some of them to be dropped. *any 3 × 1 = 3 marks* c)

  ### Describe how a rock pedestal is formed
- ☐ Wind abrassion attack a rock outcrop with alternating layers of hard and soft rocks (heterogeneous) ☐ The softer rocks are eroded faster than hard rocks.
- ☐ Wind abrassion is more effective nearer the ground surface where abrasive materials are heavier.
- ☐ This leads to the formation of rock outcrop of different shape called rock pedestal.
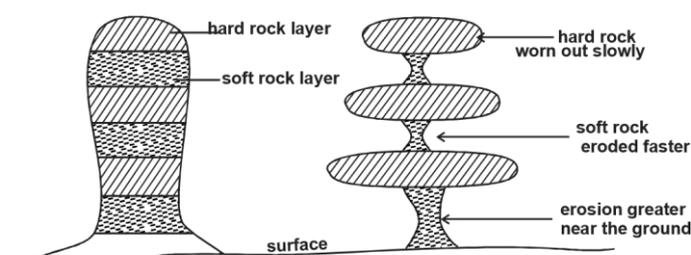
d) Explain three effects of desert features on human environment.

- ☐ Desert features form good sites for tourist attraction, thereby earning foreign exchange.
- ☐ Wind deflation hollows/ oasis are sources of water for domestic/agricultural use.
- ☐ Wind deposited sand / loess form fertile plains for farming.
- ☐ Salty flats are economically used for salt production
- ☐ Desert sceneries are ideal for film making
- ☐ Vast sand seas are ideal for military training / nuclear testing.
- ☐ Loes are curved into caves in China as dwellings.
- ☐ Shifting sand dunes hinder transport activities. *any 3 × 2 = 6 marks* e) **State two objectives of their study**
- ☐ To find out the main desert landforms.
- ☐ To find out the human activities carried out in the area.
- ☐ To investigate the problems faced in the desert.
- ☐ -To find out the main agents of erosion and deposition in the desert. *any 2 × 1 = 2 marks* ii) **Two problems they encountered during the study**
- ☐ Adverse weather condition like vey high temperatures during the day.
- ☐ Inadequate water.
- ☐ Poor transport network
- ☐ Attack by wild animals like snakes /scorpions ☐ Dust storms leading to poor visibility.
- ☐ Difficulty in identifying some features.
- ☐ Insecurity /attack by badits.
- ☐ Tiredness
- ☐ Inadequate time
- ☐ Getting lost in the desert. *any 2 × 1 = 2 marks* **9. a) Define the following terms**

- ☐
- ☐

□
      i)   **Water table**

□ It is the upper part of the zone of saturation of water in permeable rock which keep on fluctuating.   *1 mark* ii) **Aquifer**

□ It is a permanently saturated permeable rock which can hold water in its mass that is found between layers of impermeable

rocks. *1 mark*

b) How the following factors influence occurrence of underground water.

   i)   Nature of rock

☐   Rocks with pores, cracks allow more infiltration to occur / impermeable rocks don't allow water to pass through them. *2marks* ii)   The gradient of the slope.

☐   Flat areas like plains give water time to infiltrate as water remain there a long time.

☐   Steep gradient will allow a lot of surface run off hence less infiltration.   *2 marks* **c)**   i)   **Three conditions necessary for the formation of an artesian well**

☐   An aquifer must be sandwiched between two layers of impermeable rocks so as to retain water.

☐   One or both ends of the aquifer must be exposed in a region which has high rainfall to prevent it from drying.

☐   The aquifer must be syncline to ensure that the water has sufficient pressure to flow out naturally.

☐   The aquifer must be of same permeable material.

☐   There must be a partial or total blockage of exit for the water to be replaced under pressure.   *3 marks* **d) i) Name the features marked**

   P - cave

   Q - stalactite

   R - stalagmite

   S - limestone pillar   *4 marks* ii) **How feature S was formed**

☐   Rain water absorb carbondioxide forming carbonic acid.

☐   Rain water absorb calcium carbonate as it percolate in limestone joints.

☐   A solution of calcium carbonate trickles down slowly through the roof of caves / cavern ☐   Solution droplets hang on the roof of a cause.

☐   Water evaporate and calcium carbonate is precipitated.

☐   The precipitate calcium carbonate gradually builds downwards over a period of time as the solution continue to drip from the roof to form a stalactite.

☐   The solution splashes on the floor of the cave.

☐   Water evaporate and calcium carbonate precipitate

☐   The precipitate of calcium carbonate builds upwards to form stalagmite.

☐   Over time the stalactite and stalagmite join to form a limestone pillar / column.   *4 marks* iii) **Three reasons why there are a few settlements in the karst region.**

☐   Limestone region are covered with thin soils which limit crop growing other than sheep grazing.

☐   The rugged terrain make development of transport network difficult and expensive

☐   The absence of surface streams lead to scarcity of water supply which discourage settlement.

☐   The area is rocky which discourage agriculture. *3 mark* **e)**   i)   **Two methods they used to record data** ☐   Photographing / filming / video taking.

☐   Writing notes.

☐   Drawing sketches / diagrams *2 marks*

   ii)   **Three importance of studying a karst landscape through fieldwork**

☐   It gives first hand information

☐   It makes learning real

☐   It help students to develop manipulative skills of observation and recording data.

☐   It make learning interesting.

☐   It enhance visual memory hence not forgotten easily

☐   It help students to apply knowledge learnt in the classroom.   *3 marks* **10.**

a) Three factors that determine the size of a lake.

☐   The depth and width of a depression or hollow.

☐   The amount of incoming water from river, rainfall, melt water or underground water.

☐   The amount of water lost through evaporation, seepage, through permeable rocks and outflow. *3 marks* **b)** i)   **Three reasons why some rift valley lakes have fresh water.**

☐   Some lakes in the Rift valley have outlets through which excess salts are carried away leaving the water fresh.

☐   Some lakes have underground outlets which drain the salts accumulated in their beds.

☐

☐

- Some lakes are situated in areas that receive high amount of rainfall which dilutes any salt in this lake keeping the water fresh.
- Some lakes have regular inflow of fresh water from rivers which dilute salts keeping the water fresh.
- Some of the lakes in the rift valley such as L. Baringo are situated in areas of low temperatures which result in low evaporation thus keeping the water fresh   *3 × 2 = 6 marks*
    - ii)   **Name two corrie lakes in Kenya**

Teleki Lake /Tyndall tarn

Hut Tarn

- L. Hohnel
- Nanyuki tarm
- L. Hidden
- L. Thompson   *2 × 1 = 2 marks*

c)   Explain how the following lakes were formed
- **i)   Lake Tanganyika.**
- Faulting lead to fracturing of rocks along lines of weakness to form faults.
- Some parts of the earth sink and others are tilted along faults.
- This lead to the formation of deep, narrow, steep, long sided depression on the earth surface □   When water from stream and rivers fill the depressions lake are formed.
- Faulting may also result in depressions in the floor of the rift valley
- The depression are filled with rain water, river water and underground water forming lakes e.g. L. Tanganyika.

ii) Lake Paradise
- Vent eruption emit acidic lava onto the earth surface to form volcanic cones.
- Magma in the vent also cools and solidify thus contracting.
- This lead to withdrawal of magma in the vent creating a depression on top of the cone called a crater.
- The depression may be filled with rain water or melt water to form a crater lake . e.g. L. Paradise.   *4 marks* d) **Explain three negative effects of lakes.**
- High amount of convectional rainfall received around some lakes result in floods which may cause death of people, animals and destruction of property.
- Some lakes may form breeding sites for mosquitoes, snails which cause Malaria and Bilharzia to people who may die or spend much money being treated.
- Some lakes have dangerous animals such as crocodiles and hippopotamuses, which may attack and kill animals and fishermen discouraging activities in lakes.
- Some lakes create barriers to transport and communication network making roads to wind around them making construction expensive and difficult.   *3 × 2 = 6 marks*

MERU SOUTH JOINT EXAMINATION
Kenya Certification of Secondary Education
GEOGRAPHY
Paper - 312/2
Marking Scheme

1. a) Define population

Population is the total number of people living / occupying a given unit area.   *2 marks*

b) State three factors influencing population growth

- Fertility rate
- Mortality rate
- Migration   *3 marks*

2.

a) Name two agricultural non food manufacturing industries in Kenya

☐ making footwear

☐ soap manufacturing

☐ tobacco processing

☐ sisal processing / rope making

☐ leather tanning

☐ textile manufacturing

☐ bees wax processing

☐ pyrethrum processing

☐ sawmilling / pulp / paper making   *1 × 3 = 3 marks*

b) Give three benefits derived from the Jua kali sector in Kenya

☐ It has created job opportunities / employment

☐ Help in conservation as it uses old recycled raw materials

☐ Produces relatively cheapo product

☐ Facilitates decentralization of industries

☐ Empowers the people to initiate projects

☐ Goods from juakali earn foreign exchange once exported

☐ Help in spreading technological skills

☐ Saves the country foreign exchange.   *1 × 3 = 3 marks*

3.   Differentiate between domestic tourism and international tourism

☐ Domestic tourism is the visit of citizens of a country to places of interest within that country while international tourism is the visit of persons from one country to places of interest in another country   *2 marks*

b) State three inland tourist attractions sites in Kenya.

☐ National parks / game reserves/ sanctuaries.

☐ Landscapes of various landforms ☐   Historical / prehistoric sites/ museums ☐   Varied cultures.

☐ Hot springs/ geysers/fumaroles

☐ Monuments   *1 × 3 = 3 marks*

4.

a) Name the minerals found in the following areas of East Africa
   i) Kerio valley - Flourspar - 1 mark ii) Kariandusi - Diatomite - 1 mark iii) Tororo - limestone / phosphate - 1 mark

b) Give two by-products obtained when crude oil is refined

☐ Wax

☐ Bitumen / tar / pitch / asphalt

☐ Sulphur

☐ Lubricant / grease

☐ Resin / petrochemicals.   *2 × 1 = 2 marks*

5.

a) What is land pollution ?

☐ Its the deterioration of the state of land through the addition of harmful / poisonous substances. **b) State three effects of land pollution on the environment.** ☐   The garbage may result to foul smell / air pollution.

☐ The dumped waste is washed to the rivers when it rains.

☐ Garbage can be breeding grounds for rodents / flies / cockroaches.

☐ Accumulation of garbage leads to blockage of roads / drainage systems.

☐

☐

Garbage heaps are an eyesore/ make environment ugly.
Oil spillage / industrial waste lead to destruction of fauna flora / biodiversity

6.a)   *Tea* :

$$\frac{35150}{68073}$$

□360 □185.88□/186□

   Horticulture

$$\frac{21216}{68073}$$

□360 □112.190 /112.2□/112□

   Coffee:

$$\frac{11707}{68073}$$

□360 □ 61.91□/62□

KENYA LEADING EXPORT CROPS BY VALUE IN 2000
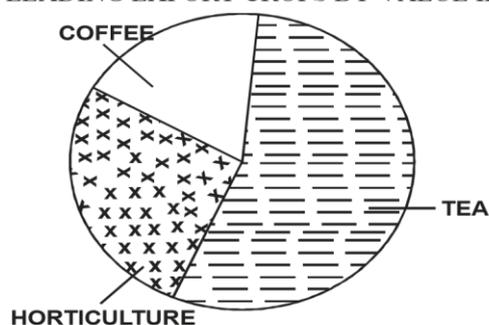
b) State four physical conditions that favour coffee growing in Kenya.
−   High rainfall □ / 1000 - 1500m / well distributed throughout the year.
−   Deep□ soils fertile volcanic soils. □
−   Cold-warm □ conditions / 14° - 24°C throughout the year.
−   The land is gentle sloping □ /well drained soils.   *4 × 1 = 4 marks*
c)   Explain four ways in which the government of Kenya assists small scale coffee farmers
□   The government has conducted research on new species of coffee and methods of controlling pests and diseases to improve quality.
□   The government has constructed new roads / improved existing ones in growing areas to enhance transportation □   The government has provided extension workers to advice farmers on better methods of coffee farming.
□   The government has advanced loans to farmers to assist them to improve on their farming.
□   The government helps farmer to market their coffee through the coffee board of Kenya (CBK)
□   The government has provided subsized farm inputs /fertilizers to farmers to reduce the cost of production.*4×2=8 marks* **d)**
     Your geography class carried out a field study on a coffee farm
     i)   State two objectives for the study.
□   To find out the variety of coffee grown □   To establish the size of the farm □   To find out how coffee is harvested.
□   To establish the source of labour
□   To find out the problems faced by the farmer.   *2 × 1 = 2 marks* **ii) Give three problems you encouraged during the study near your school**
□   Language barrier
□   Adverse weather conditions / very high temperatures / rain /fog/mist.
□   Fatigue   *3 × 1 = 3 marks*
7.
a) Define the term reafforestion. *2 marks*

□

□

Reafforestation is the practise of planting trees where they have been cut / replacing cleared forests.

2 marks b) i) **State four reasons why it is necessary to carry out afforestation programme** ☐ To protect water catchment areas.

☐ To protect soil from erosion by wind /water.
☐ To ensure sustainable supply of forest products.
☐ To put more land under forest cover / to check desertification ☐ To check extinction of indigenous trees.
☐ To regulate climate *4 × 1 = 4 marks* **ii) Give three factors that favour the exploitation of soft wood forests in Kenya** Logging can go on all the year round as Kenya is free from winter which would interrupt the activity. Hydroelectric power is readily available to the few sawmills and paper mills in Webuye.
☐ Availability of water from Rivers.
☐ Availability of cheap and ample labour for cutting and processing of timber.
☐ Timber and wood products are in a high demand within Kenya and the COMESA region which guarantees a ready market for the products. *3 × 1 = 3 marks*

c) i) **Four factors that have led to the reduction of the area under forest on the slope of mount Kenya** ☐ The illegal encroachment of human activities / illegal cultivation has led to clearing of the forest.

☐ Increased population of elephants that destroy the trees.
☐ Prolonged droughts have caused drying of some trees.
☐ Plants diseases / pest destroy some trees in the forests.
☐ Outbreak of forest fires /charcoal burning destroy parts of the forest.
☐ Over exploitation of certain species of trees *4 × 1 = 4 marks*

ii) State four ways in which the clearing of forest has affected the natural environment. ☐ It has led to reduced volume of water in the rivers / caused drying up of rivers.

☐ It has disrupted the ecosystem
☐ It has accelerated soil erosion
☐ It has led to destruction of natural habitat for wildlife / it has endangered some of the wildlife species.
☐ It has led to changes in the rainfall pattern / desertification.
☐ It has interfered with the beauty of the environment / lowered the aesthetic value of the environment. *4 × 1 = 4 marks* d) **Explain four factors that limit the exploitation of tropical rainforest in Africa.** ☐ Tree take long to mature which discourages exploitation.
☐ The forest has a thick undergrowth which make penetration / development of roads difficult.
☐ Trees occur in mixed form making it difficult to exploit valuable species.
☐ The Climbers / thick vegetation obstruct the felling of trees / huge buttress roots obstruct felling operation / slow felling of trees.
☐ Water logged / swampy ground makes construction and maintenance of roads expensive /impassable.
☐ Hot and humid conditions are uncomfortable / encourage breeding of disease carrying pests which affect human beings.
☐ Some wild animals found in the forest are dangerous and may attack people.
☐ Logs are heavy / bulk hence difficult to transport.
☐ Limited use of hardwood discourage exploitation *4 × 2 = 8 marks*

8.
a) **What is a game sanctuary?**
A game sanctuary is a specific area established to give protection to a specific animal community / birds which are either threatened with extinction / only fond in a particular area. *2 × 1 = 2 marks*
b) **MAP OF KENYA**
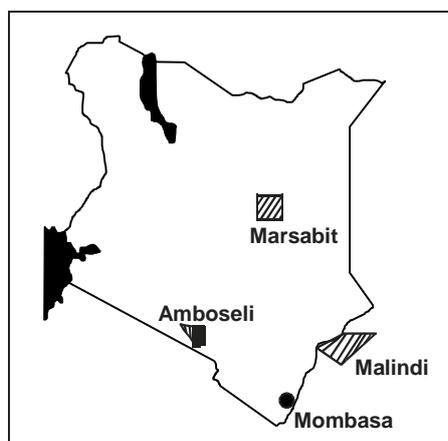
3 × 1 = 3 marks

c) i) **Give five reasons why Kenya needs to conserve wildlife.** □
    So as to protect the endangered animals / plant species/ regeneration

□ So as to promote tourism

□ To generate foreign exchange / revenue

□ To keep wildlife for posterity / future generation.

□ To sustain the raw materials for supply of drugs / medicinal value.

□ For educational /research purposes.

□ For aesthetic value / beauty / recreation   *5 × 1 = 5 marks* **ii) Name three historical sites in the coastal region of Kenya**

□ Gede ruins

□ Fort Jesus
Vasco Da-gama Pillar
Shimoni caves.   *3 × 1 = 3 marks*

d) i) **Give five advantages of game Ranches in Kenya.** □   The animals / wildlife is exploited for meat and other products.

□ The ranches help to encourage environmental conservation

□ The ranches help to protect endangered animals species / from hunters / predators.

□ The wildlife in the ranches may attract tourists who bring in foreign exchange.

□ Wildlife utilizes marginal land better / help in the utilization of marginal land.

□ Wildlife withstand drought better than livestock. *5 × 1 = 5 marks*
    ii) State three problems posed by wildlife □   Wildlife may kill livestock / spread diseases.

□ Wildlife may occupy agricultural land.

□ Wildlife destroys crops / agricultural / vegetation.

□ Wildlife kills people. *3 × 1 = 3 marks*

e)   **Outline four wild animal products on which trade ban has been imposed.**

□ Rhino horns

□ Elephants tusks / ivory

□ Crocodile skin

□ Leopard skin

□ Lions skin

□ Zebra skin   *4 × 1 = 4 marks*

9.

a) i) Define the term transport. (2 marks)

□ Transport is the movement of goods / people from one place to another.   *1 × 2 = 2 marks* **ii) Name three international airports in Kenya. (3 marks)** □   Jomo Kenyatta International Airport Nairobi. □   Moi

□

□

International Airport Mombasa ☐ Eldoret International Airport. **iii) State four ways in which Kenya benefits from her international airports. (4 marks)** ☐ Creates employment opportunities raising the standards of living.

☐ Provide quick transport hence promoting horticultural farming.

☐ Have promoted tourism

☐ Government earns revenue through taxation of goods and passengers.

☐ Have promoted international trade.

☐ They have promoted international understanding by enabling Kenyans to interact with people from other parts of the world.

any 4 × 1 = 4 marks

b) Explain four ways in which road transport has been improved in Kenya

☐ Construction of highways / dual carriage ways / road expansion to accommodate more traffic / improve traffic flow.

☐ Construction of bypasses / fly-overs / underpasses to reduce congestion / improve traffic flow.

☐ Rehabilitation / maintenance of major roads to reduce accidents / improve traffic flow.

☐ Control of load carried by trailers / big lorries to reduce damage on road surfaces.

☐ Education road users / public on road safety precautions / discipline on roads to ease traffic / reduce accidents.

☐ Providing paths for pedestrians / cyclists to reduce congestion on roads / improve road safety.

☐ Enforcing traffic rules to reduce road accidents / regulate traffic flow.

☐ Amendments of the Traffic Bill in 2012 by introducing more stringent traffic rules to ensure improved road safety. *any 4 × 2 = 8 marks*

c) State four advantages of railway transport over road transport. (4 marks) ☐ There are less traffic jams in railways.

☐ Trains carry more bulky goods over long distances at one.

☐ Once built railways require less maintenance while roads require frequent resurfacing.

☐ Trains are less prone to accidents compared to vehicles.

☐ Trains are more efficient as they operate on a rigid schedule.

☐ Railway transport is cheaper than road transport. *any 4 × 1 = 4 marks*

d) Give four reasons why motorcycle transport has become common in most parts of Kenya. (4 marks) ☐ They offer transport in areas that are inaccessible by motor vehicles / give door to door services.

☐ Motorcycles are cheaper to maintain than vehicles.

☐ Motorcycles are more affordable than vehicles.

☐ Most roads / paths in the rural areas are narrow making motorcycles the most suitable means of transport.

☐ Motorcycles require minimal skills to ride so many people are able to use them.

☐ Motorcycles uses less fuel than vehicles. *4 × 1 = 4 marks*

10.

a) Differentiate between internal and regional trade. (2 marks)

☐ Internal trade is the buying and selling of goods and services within a country's borders while regional trade is trade among

countries found in the same geographical region. □ □   *1 × 2 = 2 marks*

ii) **Name four major imports to Kenya from the European Union (4 marks)**

□ Machinery
□ Motor vehicles.
□ Medicine / pharmaceuticals.
□ Chemical fertilizers.
□ Iron and steel
□ Chemicals
□ Textiles   *4×1=4 marks*

b) State five ways in which trade is of significance to Kenya.   (5 marks)

□ Trade generates revenue through taxation of goods /services.
□ Creates employment opportunities through industries established / creates self employment.
□ Export of goods enables a country to earn foreign exchange.
□ The demand for goods stimulates industrial growth / agricultural growth.
□ The need to reach far off markets leads to expansion of transport facilities.
□ Trade leads to development of urban centres / urbanization.
□ Trade stimulates specialization in the production of goods.
□ Enhances cooperation between Kenya and other countries / between communities in Kenya.
□ Trade between Kenya and other countries ensure availability of a wide variety of goods.
□ Stimulates exploitation of existing natural resources because there is market for the goods.   *5 × 1 = 5 marks* **c)**

Explain four problems facing trade in Kenya.   (8 marks)

□ Cheap imported goods create unfair competition for some local products.
□ Exports are mainly raw materials / agricultural goods which are lowly priced hence low earnings for the country.
□ Trade restrictions on Kenyan goods affect the production of such goods / causing losses to exporters.
□ Fluctuations of prices in the world market varies revenue from exports making it difficult to plan
□ Poor / inadequate transport and communication facilities in some areas cause delays of delivery to markets / delivery of raw materials to industries / cause spoilage of goods increasing the cost of goods.
□ Slow clearance of goods at the port of Mombasa delays delivery of goods / increases the cost of goods.
□ Corruption / smuggling of goods results in loss of government revenue.
□ Inadequate capital for some traders make them unable to expand their trading activities.
□ Insecurity in the country discourages investors / makes traders to incur heavy losses.
□ High fees paid in form of trading licences discourage traders.
□ Poverty / low incomes among the people make it difficult for them to afford most goods.
□ High fuel prices increase production / transportation cost leading to increased prices of goods / low demand for goods.
        4 × 2 = 8 marks

d) Your class intends to carry out a field study on the Nairobi International
        Trade fair

i)   State three methods you would use to collect data.   (3 marks)

□ Content analysis
□ Observation / observing
□ Photographing / taking photographs.
□ Interviewing
□ Administering questionnaires ii) **Give three reasons why a reconnaissance would be necessary. (3 marks)** □ To determine the likely cost to be incurred during the study.
□ To be able to formulate the objectives for the study.
□ To be able to prepare appropriate data collection methods.
□ To be able to prepare a working schedule.
□ To determine the appropriate tools for the study.
□ To find out the likely problems to be experienced during the study.   *3 × 1 = 3 marks*

        NYAKACH SUB-COUNTY JOINT EVALUATION EXAMS
        KENYA CERTIFICATE OF SECONDARY EDUCATION (K.C.S.E)
        GEOGRAPHY

Paper - 312/1
<u>**MARKING SCHEME**</u>
<u>**SECTION A**</u>

1.

(a) Characteristics of Sial

☐ Mainly composed of granitic rocks

☐ The rocks of the sial are brittle/solid

☐ Main minerals are Silica and aluminium

☐ Average density is   1st 3x1=3mks

b) Two characteristics of the troposphere.

☐ It"s first layer of the atmosphere

☐ Its where most of the weather forming processes takes place

☐ Experiences a positive lapse rate temperatures decrease with increase in height.

☐ Its the life supporting layer c

☐ Contains about 90% of water vapour.   1st 2x1=2mks

2

(a) A longitude is an imaginary running from North to South and shows how far East or West a place is from the prime meridian.

b)   **x   Nairobi**

$$\begin{array}{c}\\ \\ \longleftarrow \\ \\ \end{array}$$

8.00am   37°E 12.00 noon
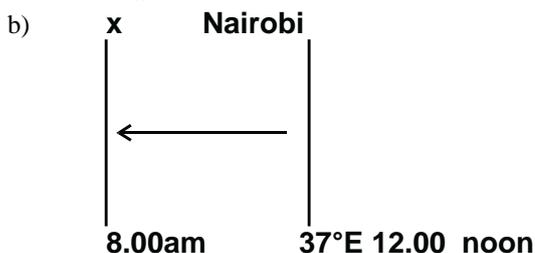
Difference in the 1200 hrs
                              800 hrs
                              400hrs

        1   =15⁰
        4hrs =4x15=60⁰
                          1
        60⁰
        37
        23⁰w

3

(a) Main cause of Earth movements.

☐ Magna movement/volcanic eruption

☐ Isostatic adjustment

☐ Convectional currents in the mantle

☐ Gravitational force that pulls rocks towards the centre of   the earth.   1st 3x1=3mks **b)**
    Two main earthquake zones in the world.

☐ Circular pacific belt/ pacific revelry of fire

☐ Tethian/Mediterranean belt

☐ The great Rift valley belt

☐ Areas of recent volcanic belt activities/folding/faulting belts.

☐ Areas extension boundaries.   1st 2x1=2mks

4

(a) Two features of emerged highland coasts

☐ Raised beaches

☐ Raised cliffs

☐ Raised wave cut platforms

☐ Raised laves

☐ Raised – Arches   1st 2x1=2mks

b) Three conditions necessary for the formation of a spit.

> The shore line should be shallow

☐ Forms where here''s a relatively weak long

☐ shore current/rift

☐ Presence of abundant supply of sand/shingles

☐ presence of minor sea waves to swing the tip of the sand bar.

☐ The swash should be stronger than the backrush. 1st 3x1=3mk

5

(a) Features marked;

P Gentle windward slope/curved shape

Q Eddy currents   2x1=2mk

b) Formation of a deflation hollow.

☐ Loose and unconsolidated materials are removed by wind from the surface of the earth through deflation.

☐ Wind eddies carries the loose particles away.

☐ The area where the materials are moved is gradually lowered and widened to form a shallow depression called a deflation hollow.

SECTION B

6) (a) (i)   **The latitudes extends from $0^0 45''s$ to $1^0 15''s$.**

> The latitudinal extent is

$1^0 15''s$

$0^0 45''s$

$0^0 30''s$ (1mk)

ii) Approximate height of Kyooni hills is 1360m above sea level. 1mk iii) Full squared 36

Half squares ☐ ☐ ☐ ☐

☐ ☐

$^8/_{44}$ km^2 10.5

2mks

iv) Distance of River Ikoo

7.8 km 1 0.1   (1mk)

b) (i) VE= Vertical scale

Horizontal scale

1:4000   =____1____ x   50,000

1:50,000   4,000   1

V.E   X 12.5=2mks
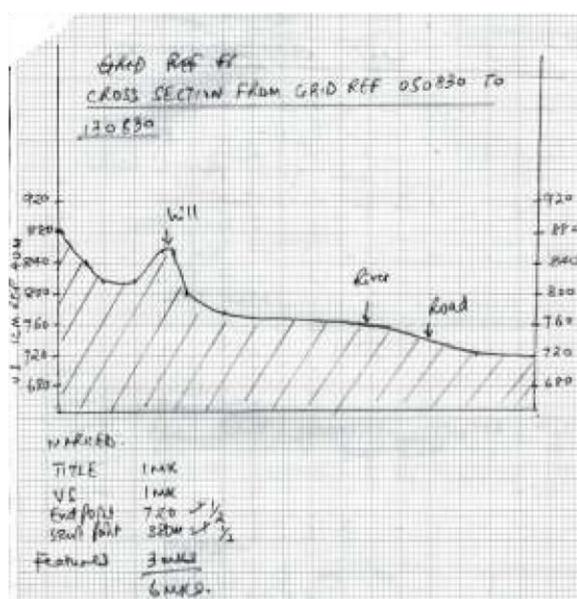
Relief n the area covered by the map

☐ There are hills in the area covered by the map e.g kitui hills.

☐ The Easter part of the area covered by the map has gentle slopes as evidenced by widely spaced contours.

☐ There is an escarpment in the western part of the area covered by the map evidenced by elongated contours.

☐ The area is generally characterised by dissected relief evidenced by many river valleys cutting deep into the landscape.

☐ The land generally sloped eastwards

☐ The area to the west had steep slopes evidenced by closely spaced contours.

☐ There‟s a parts in Grid square 9482.

☐ There‟s a saddle in grid square 0683.

☐ Highest altitude is 1530m represented by the Trigonometrical station in grid square 9264.
The lowest point is 620m found in the S. Eastern part of the area.   Any 4x1=4mks

d) (i) Physical factors that may have   influenced settlement in the area covered.

Relief - No settlement occurs on the steep slopes covered by the escarpment.

Climate - sparse settlement occurs on the dry areas to the east evidenced by presence of scrub vegetation.

Drainage - No settlement occurs during the lower course of river Ikoo probably due to incidences of floods.

Any 2x2=4mks ii) Two factors that may favour trading in the areas covered by the map.

☐ Transport /Roads. Presence of of roads e.g all weather loose surface wed C94 facilitates easy movement of goods and people.

☐ Trading centres e.g Mutitu and Gwani offers opportunities for trade   Any 2x2=4mks

7

(a) Differentiate between rocks and minerals   (2mks)

Rocks are hard substances made up of mineral particles forming the earth"s crust while minerals are inorganic substances occurring naturally on the earth"s crust.   1x2=2mks   ii) Give four characteristics of minerals(4mks)

☐ Minerals differ in the degrees of hardness.☐

☐ Some minerals aggregate into distinct shapes.

☐ Different minerals have different colours. ☐   Minerals differ in texture (feel) ☐   Minerals differ in cleavage.

☐ Minerals differ in steak/ colour left when a mineral is rubbed against a hard surface.

☐ Minerals differ in cluster (surface) appearance as it reflects light. ☐   Minerals have different degrees of tang ie ☐ whether brittle, elastic, ductile or flexible.

☐ Minerals differ in their composition   *Any other relevant point accepted* 1st 4x1=4mks

b) (i) Give the three criteria of classifying rocks.   3mks

☐ According to physical and chemical composition.

☐ Rocks are classified according to mode of formation and appearance of origin.

☐ According to their age.   3x1=3mks

ii) Describe Any four changes that take place during rock metamorphism.

(4mks) ☐   The chemical composition of the rock changes. ☐   New mineral form.

☐ The rocks become hard/become more resistant.

☐ Physical appearance of the rock changes is altered.   1st 4x1=4mks **c) Describe the following:**

i)   Mechanically formed rocks   (2mks)

These are rocks formed when eroded material is transported and deposited in water or land and compacted/consolidated ii) Organically formed sedimentary rocks

These are rocks derived from the remains of plants and animal deposited and compacted over along period of time.2mks iii) Organically formed sedimentary rocks.

These are rocks derived form the remains of plants and animals deposited and compacted over a long period of time.2mks iii) Chemically formed sedimentary rock.

These rocks formed from chemical process like evaporation of water in a solution   1x2=2mks

d) Explain three significance of rocks to man.   (6mks)

☐ Rocks weather down to form rich agricultural soil for crop production.

☐ Rocks are used in building and road construction.

☐ Some valuable minerals may be mined from the rocks.

☐ Some rocks form water reservoirs that are exploited for domestic use

☐ Granitic tars form spectacular scenery that attracts tourists thus earning foreign exchanges

Any other relevant plant accepted. 1st 3x2=6mks

8

a) (i) Give three differences between   faulting and folding.   (3mks)

☐ Faulting is caused by tensional compressional and shear forces while folding is only caused by compressional forces.

☐ Faulting occurs in all types of rocks while folding occurs mainly on young sedimentary rocks.

☐ faulting involves breaking/fracturing of crustal rocks while folding involves bending/crumbling of crustal rocks.

3x1=3mks

ii) Name three features resulting from   faulting apart from rift valley   (3mks) ☐   Hearst mountains /block mountains.

☐ Tilt blocks. ☐   Fault steps.

☐ Plateau   1st 3x1=3mk

☐

iii) Describe with the aid of well labelled diagram the formation of a rift valley by anticlinal arching.

☐ Vertical tectonic forces push the earth''s crust upgrades. The ground arches/bends upwards.

☐ The continental pushing creates a list of stress at he crest of the art line, making it to crack.

☐ The huge crack formed becomes the rift valley.
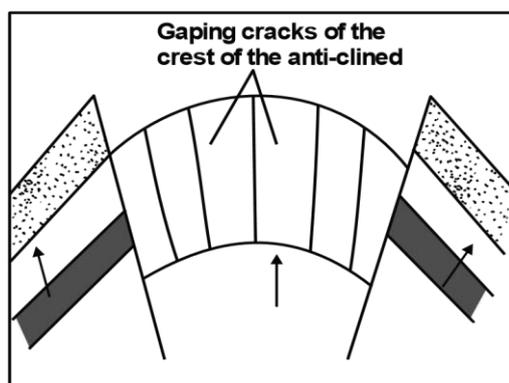
b) explain four negatives influences of faulting on human environment.   (87mks)

☐ Faulting may cause sections of the land to become disjointed causing a disruption in transportation lines (roads, railways, pipelines).

☐ Faulting can affect power and telephone lines, making it expensive to construct across fault lines.

☐ Faulting may cause or disappear into the ground along the fault causing water shortage for people down stream.

☐ subsidence of land due to faulting can lead to loss of life and destruction of property.

☐ The resultant block mountains created through faulting may receive low rainfall/is dry on the leeward side therefore may not be useful for agriculture/lack of water for domestic use.

NB.

Influence must e well explained in order to score.   1st 4x2=8mks

c)   Students from a school in Nakuru county constructed field strode on faulting in the rift valley of
Kenya. Design a working schedule they are likely to have sued while in the field.   (5mks)   800am -collect
and assemble the equipment   9.00a.m - Depart fro the field strode.

10.00am- Report to the authorities at the KWS office in the field.

10:30a.m - Embark on data collection.

3.00pm-   Report back to the authorities.

3.00 pm- Depart back to school.

**NB** Accept logical sequence without time.   5x1=5mks

9

a) (i) Define a watershed.   (3mks)

-          A watershed is a raised area, ridge or a highland that separates one drainage basin from another.   1x2=2mks ii)

With the aid of well labelled diagram describe how a river capture occurs. (8mks)

☐ It occurs where the private river erodes its valley headwardly towards the valley of the weak river.

☐ Eventually, the pirate river joins the valley of weaker river.

☐ The head waters of the weaker river are diverted and start flowing into the pirate river.

☐ The weaker river losses most of its water and becomes smaller in size.

☐ This is now known as misfit.
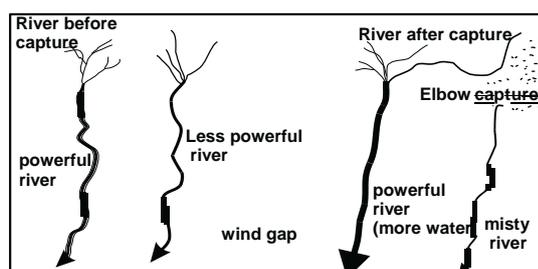
iii) State three conditions under which a river gorge is formed.

- Where a river flows a long a line of weakness (fault line or a line of less resistant rock).
- Where a river maintains its course across uplifted landscape.
- Where a river flows a cross a plateau composed of horizontal and alternate layers of hard and soft walls.
- Where a waterfall retreats upstream.   1st 3x1=3mks **b (i) Name drainage patterns found in the following areas.**
- On the slopes of mt. Kenya - Radial (3mks)
  On the floor of Rift valley of Kenya- Fault guided.
- On the shore of lake Victoria of Kenya centripetal.   3x1=3mks   ii) Explain THREE ways in which features found in the youthful stage of a river are of economic importance to man.(6mks) □   Features such as waterfalls and gorges provide scenery which are beautiful hence attract tourists who bring foreign currency.
- Waterfalls are ideal sites for the generation of hydro electric power used for domestic and industrial purposes.
- A narrow river gorge minimizes the cost of construction of a dam which is required for H.E.P generation.1st 3x2=6mks **c) You intend to carry out a field study of a river.**
  i)   What is hypothesis.
- A hypothesis is a statement of an outcome, relationship, explanation or proposal which field work is designed to prove or test.
- An idea, guess or suggestion from which reasoning or explanation is sought.   Any 1x1=1mk   ii) State three techniques you would use to record information while in the field.
- Note making.
- Drawing sketches.
- Photographing/taking photographs.
- Tape recording   1st 3x1=3mks

10

a) (i) Define Karst Scenery.   (2mks)

Karst scenery is a rugged region. Covered by limestone/chalk/dolomite rock which is acted upon by chemical weathering/isolation and carbonation to produce unique features.

1x2=2mks   ii) State four factors that influence the   development of Karst Scenery.
-        The surface and rock beneath should be thick limestone, dolomite or chalk.
    iii) State four factors that influence the development of Karst Scenery.

- The surface rock and rock beneath should be thick limestone, dolomite or chalk.
- The rock must be more resistant and well joined.
- The climate must be hot and humid to enhance chemical weathering.
- The water table in the limestone rocks should be below the surface   1st 4x1=4mks **b (i) Mention three surface features in limestone areas.**
- Grikes and clints. □ Shallow holes □ Dry valleys.
- Urala.
- dolines.   1st 3x1=3mks

    ii) Draw a limestone care, and on it mark and name the following features.   (3mks).

Stalactite

Pilla

cav

Stalagmite
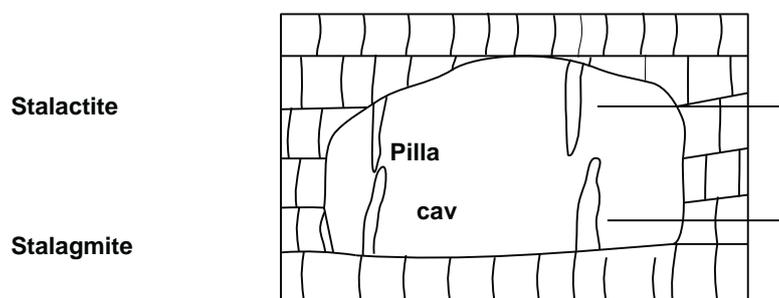
 3 features - 3mks **c (i) State five factors that influence the existence of under ground water.**
- Availability of precipitation either rainfall or snow fall.√
- Slopes - infiltration is greater on flat areas since water is likely to remain in one area for a long period of time.
-

- Nature of rock- rocks must be permissible toallow for penetration and eventually for thepresence of underground water.
- Vegetation cover- its presence increases rate of infiltration.
- level of saturation of the ground - the rate of water infiltration is higher when the ground is very dry.
- Evapo- transpiration- must be minimal since it reduces the amount of water that is available in the soil. 1st 5x1=5mks   ii) Explain four significance of underground water   (8mks)
- Source of rivers ie many springs are sources of rivers which are used for both economic and domestic purposes.
- Agriculture ie ground water is used for irrigation thus enabling practice of agriculture throughout the world.
- Settlement ie development of settlement in some parts of the world is loosely associated with the occurrence of springs.
- Hot springs contain sulphur which is believed to cure various ailments.
- source f minerals ie at the moth of many hot springs, valuable mineral salts are deposited and people exploit them for economic gains.
- Provision of hot water ie hot springs are tapped and the water pumped into hoses through pipes during winter hence harming up the houses during the cold seasons.   1st 4x2=8mks

NYAKACH SUB-COUNTY JOINT EVALUATION EXAMS
KENYA CERTIFICATE OF SECONDARY EDUCATION (K.C.S.E)
GEOGRAPHY
Paper - 312/2
MARKING SCHEME
SECTION A

1. **(a) Name two forest reseves in the coastal region.**
   - Shimba Hills forest
   - Arabuko Sokoke fores
   - Boni/Dodori forest
   - Magrove forest
   - Kaya forest.   2x1=2mk

   b)   Factors that has led to foest cover
   - Illegal cultivation has led to clearing of parts of the forest.
   - Increased population of the elephants that destroys the trees.
   - Prolonged drought have dried the tees.
   - Plant diseases and pest has destroyed some trees.
   - Outbreak of forest fires/charcoal burning over exploitation of certain species of trees.

2
a)   Three horticultural crops grown in Kenya are:-

-Roises	-Solidago	-Onions -Brinjals
-Lilies	-Orchids -Peas	-chillies
-Carnations	-Anthurium	-Tomatoes
-Gladioli	-Chrysanthemum	-Spinach
-Broccoli -Solidioli -Carrots -Kale -Okra.		

b)   Two significance of horticultura faming in Netherlands are:-
   - Horticultural products accounts for atleast 30% of he total agricultural exports.
   - The industry provides food and flowers for the local market in Netherlands.
   - It has also encouraged more land reclaimed from the sea as well as providing employment to thousands of people. Attract the establishment of industries hence creating job opportunities.

3
a)   Three reasons why pan African for pulp and paper is situated at Webuye
are:- nearness to R. Nzoia for water supply.
   - Established transport links
   - Plenty of soft wood trees fro adjacent Highlands.
   - Plenty of labour supply from densely populated surrounding areas   3x1=3mks
b)   Two problems associated with Jua Kali sector in Kenya
are:- Inadequate financial resources to invest in the sector
   - Stiff competition from imports
   - Limited local market due to low purchasing power   Inadequate skilled personnel/technical skills
   - Inadequate managerial skills.

4
a)   Problems associated with shaft mining.
   - Mines may get flooded
   - Emissions of poisonous gases
   - dust produced causes respiratory diseases.
   - tunnels may collapse causing death to minerals.   3x1=3mks b)   Effects of mining
   - Dumping of rock waste leads to loss of biodiversity.
   - Dereliction of land /destroys the beauty of the land.
   - Exposess the land to agents of erosion.
   - Pollutes the environment by noise/smoke.
   - Water pools are health hazards as they form breeding grounds for vectors/drawing areas.
   - Disrupts water tables leading to shortage of water.

5
a)   Benefits o rural electrification
   - Creation of employhment opportunities in the emerging industries hence improving peoples living standards.
   - Reduces rural urban migration.

- Reduces deforestation/enhances conservation of forests.
- Attracts social amenities ii)   Advantages of comparative bar graphs.
- Simple to construct
- Comparison can be made easily
- Exact values can be read
- Gives a good visual impression   (2mks) iii) Percentage increase

2002   74000
2003   777000

        77700
 -74000   =3700x100   =5%   3700   74000

b)   Commodities that Kenya Imports

- Crude oil
- Electronics
- Pharmaceuticals
- machinery
- Fertilizers
- Motor vehicles   3x1=3mks

c)   Benefits of COMESA to Kenya.

- Kenya has expanded Market for her goods.
- Cheaper goods due to reduced tariffs.
- Increased cooperation between Kenya and member states of COMESA.
- Availability of a variety of goods from other parts of the world.   2x2=4mks d)   Establishing import substitution industries to reduce importation of some commodities. □   Reduce high quality manufactured goods to fetch higher prices.
- Diversity agricultural export base to enable the country have a variety of exports.
- Encourage development of Jua Kali industries to reduce importation of heavy machinery.
- Developing alternative sources of energy to reduce importation of petroleum.
- Restrict importation of luxury items through high taxation.
- Encouraging local assembling of machinery as the importation of parts is cheaper.
- Increasing popularizing tourism to increase earning from invisible trade.   (6 mks)

7
(a) Different types of vegetation

- Drainage
- Comte
- Topography   3x1=3mks b)   Significance of wildlife
- Enhance the beauty of the environment.
- Attract tourism who bring in foreign exchange. □   To provide material for medicinal extracts □   Promote scientific research.
- Helps protect water catchment areas.
- the conservation of wildlife creates employment opportunities hence raising peoples living standards. □   Some animals kept in private ranches provide □   game meat for consumption/export.

c   (i) Domestic tourism is the visit of a country" citizens to place of interest within that country. □□(2mks)
ii)   Why domestic tourism is encourage.

- To Expose Kenyans to the wide variety of recreational facilities. □   To make use of tourist facilities during low tourist season.
- To make Kenyans appreciate the country"s national heritage. □   To encourage circulation of money within the country.
- To create employment in the country.   4x1=4mks
        iii) Historical sites/Fort Jesus/Gede ruins/Vasco-Da Gama pillar.
- Sandy beaches
- Marine lite/mangrove forest/wildlife
- People"s culture
- Wastal landforms/care cliffs/corals.
- Wasru Sunny climate   4x1=4mks d)
- Switzerland is located in central Europe making easily accessible to tourists from Europe while Kenya is far from Europe which is the major source of tourists.
- The peaceful atmosphere in Switzerlandencourages more tourists as opposed to
- Kenya where there are occasional reports ofinsecurity which are away potential tourists.
- Switzerland has roe efficient marketing system while Kenya"s marketing is less efficient.

☐ The well developed transport network in Switzerland provides easy access to tourist sites whereas in Kenya many roads are poor.

                                        4x2=8mks

8)   Physical conditions that favour coffee
a)   Deep fertile volcanic soils
☐ Cool to warm conditions/14^0C-24^0C
☐ Gentle slopes that allow good drainage/mechanization.
☐ High rainfall
☐ Well distributed rainfall through out the year.   3x1=3mks b)   Processing of coffee
☐ The berries are sorted out to remove the unripe diseased berries. ☐   Berries are graded into A and B.
☐ The different grades are weighted
☐ The berries outer cover is removed by a machine.
☐ The beans are fermented in tanks. The beans are then washed ans Sundried for one weak.
☐ The Husks are removed and the beams are winnowed.
☐ Beans are sorted out and graded according to sizes and chality.
☐ Beas are roasted.
☐ Beans are ground into powder then packed for sale.   8x=8mks ii)   Two varieties of coffee
☐ Arabica
☐ Robusta   2x1=2mks
c)   main areas where sugarcane is grown
☐ Nyanza belt/Muhoroni/Awendo
☐ Western sugar belt/Nzoia /Mumias/Nambale
☐ Coastal belt Ramisi   3x1   = 3mks
d)   Problems facing sugarcane farmers in Kenya.
☐ Pests such as white scales, whitegrub, termites lowers the crop yield.
☐ Diseases such as Rotan stunting/smut lowers crop yields
☐ Delayed payment due to mismanagement of the factories lowers the farmers moods
☐ Completion from cheap imported sugar leads to delay in selling/paying the farmers hence killing their morals. ☐   Frequent fires by arsonists leads to losses incurred by farmers
☐ Poor roads delays delivery hence lowering
☐ quality /famers incur losses.   4x2=8mks

9
a)   (i) -B   (1mk)
-        A   (1mk)
        ii)   Characteristics of age sex   Pyramid
☐ It contains the structure of popylation by sex
☐ It contains the structure of ppyulation by age
☐ It has a colun of the middle hat shows the age cohort.
☐ the left han side represents the male population and he right hand represent the female population 3x1=3mks   iii) Differences between Pop. structures of the two countries ☐   A is a young population while B is an ageing population.
☐ B has a high lite expectancy while B has a low life expectancy. ☐   A has high birth rates while B has low birth rates
        3x2=6mks b)   Mortality- High earth rate reduces population.
☐ high feasibility rates increases the number of people.
☐ Migration distributes the population over a geographical regime. c)   consequences of high population.
☐ Heads to high dependency ratio resulting into little savings
☐ High unemployment area as jobs may not increase at a rate than can cope with population growth.
☐ increases in he demand for social amenities leading to congestion.
☐ Increased demand for agricultural land causing land fragmentation/landless/destruction of forests.
☐ High expenditure to meet demands for development of income generating projects hence slow economic growth.
                                                        4x2=8mks

10. Canals L and N
a)   (i) L   -Welland canal   (1mk)
                N   -New York sate Barge Canal
        (1mk)   ii)   Lakes
                F   -Superior   (1mk)
        G   -Ontario   (1mk)
iii) Port H   -Duluth   (1mk)

b)   Removal of rock outcrops by blasting

☐   Waterfall and rapids on the watercourses were to be by-passed by canals and locks ☐   Silt deposited by river Detroit.

☐   Fluctuation of the volume of St. Lawrence river. ☐ Earlier of the volume of St. Lawrence river.

- Earlier canals were too shallow for ocean- going ships.
- Fogs of the Mouth of the St. Lawrence river brought a lot of accidents.   4x1=4mks c)   Reasons why there is limited use of river transport in Kenya. ☐   Some rivers have seasonal regime fluctuating volume.
- Some rivers are shallow/have silted river mouth.
- Some riers have floating vegetation that blocks then courses/blocked by dewe chokes swamps.
- Some riers re winding hence inconveniently increasing distance.
- Inadequate capital to develop waterwayspurchase vessels.
     (ii) construction of by passes
- subways/tunnels/flyovers/underpasses to reduce congestion in large towns.
- Construction of highways/dual carriage ways/road expansion. to accommodate more traffic improve traffic flow.

- Prepare maintain the roads in good state to reduce road accidents.

- Educate road used on road safely precautions to ease traffic on roads.

- Control amount of load carried by largelorries to reduce damage on the roads surfaces

- Enforce traffic rules to regulate traffic flow

- Provide paths for cyclists and pedestrians to reduce angestom on roads.

- Air transport is faster

- It does not experience congestion

- Helicopter can land in remote areas.

BELOW ARE REVISION EXERCISES
GUCHA SOUTH EVALUATION TEST (GSET)
Kenya Certificate of Secondary Education
312/1
GEOGRAPHY PAPER 1
SECTION A

Answer **ALL** the questions in this section.

1. a) What is an eclipse?   (2 marks)

    b) Study the diagram below and answer the questions that follow.
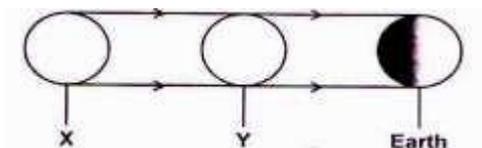
        Name the eclipse shown in the diagram.   (1 mark)

        Identify X and Y   (2 marks)

2. a) State three human causes of earthquakes.   (3 marks)

    b) Give two types of surface waves caused by earthquakes.   (2 marks)

3. a) State two causes of River capture.   (2 marks)

    b) Give three advantages of river to man.   (3 marks)

4. The diagram below shows features as a result of glaciation. Use it to answer the questions that follow.
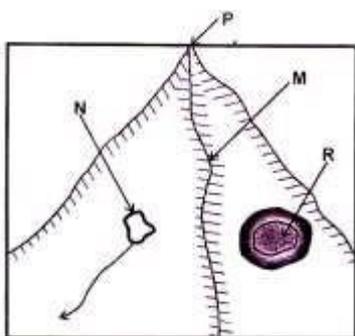
    a) Identify the features labeled M, N and P.   (3 marks)

    b) Name two processes through which the feature marked R is formed.   (2 marks)

5. The diagram below represents the structure of the earth. Use it to answer question (a)
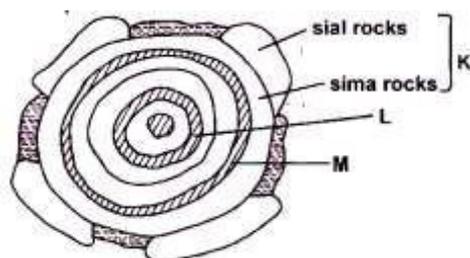
a) Name the parts labeled K,L and M (3 marks)

b) State two external layers of the earth. (2 marks) **SECTION B**

Answer question 6 and any other TWO questions from this section.

6. Study the map of Migwani 1: 50,000 sheet (151/1) provided and answer the following questions.

a) i) Convert the representative fraction scale of the map extract into a statement scale. (2 marks)

   ii) Find the bearing of the dispensary in grid square 9980 from the primary trigonometrically station in grid square 9374. (2 marks)

   iii) Measure the length of the track from the Sourthern end of the map at grid square 9361 to Usiani school in grid square 9568. (2 marks) iv) Name two physical features found grid square 9865 (2 marks)

b) Draw a rectangle measuring 16cm by 12cm to represent the area enclose by Eastings 05 and 13 and northings 63 and 69. i. On the rectangle mark and make the following features.

Ikoo River (1 mark)

Dry weather road (1 mark)

Mutito forest (1 mark)

Water pipeline (1 mark) ii. Describe the drainage of the area covered by the map. (4 mark) c) Citing evidence in the area covered by the map extract.

i) Identify two social functions carried out in the area covered by the map. (2 marks) ii) Name three factors that have influenced the settlement in the area covered by the map. (3 marks) iii) Name any two types of vegetation common in the area covered by the map. (2 marks)

7. a) i) name three types of faults. (3 marks)

ii) Apart from the Rift valley, name three other features resulting from faulting. (3 marks) b) With the aid of diagrams, describe how tensional forces may have led to the formation of the Great Rift valley. (7 marks)

c) i) Give the difference between fault-scrap and fault-plane. (2 marks)

ii) Outline two characteristics of Rift valley lakes. (2 marks) d) Explain four positive ways through which faulted landscapes influences economic activities. (8 marks)

8. a) i) Define the term „karst scenery" (2 marks)

ii) Name three features which form on top of Karst scenery. (3 marks) b) i) State three conditions necessary for the formation of karst scenery. (3 marks)

ii) Give three reasons why there are few settlements in karst landscape. (3 marks)

c) Explain how the following factors influence the existence of underground water.

i) Precipitation (2 marks) ii) Nature of the rocks (2 marks) iii) Vegetation cover. (2 marks) d) Explain the importance of karst scenery. (8 marks) 9. a) i) What is natural vegetation. (1 mark)

ii) Give five characteristics of natural vegetation found in tropical rainforest. (5 marks)

b) Name grasslands in the following areas.

☐ East Africa (1 mark)

☐ Central Africa (1 mark)

☐ Australia (1 mark)

☐ Canada (1 mark)

☐ South Africa (1 mark)

c) Your school is planning for a field study on vegetation around the school neighborhood. Give one reason for the learners carrying the following.

i) Tape measure (1 mark) ii) Jembe (1 mark)

iii) State two methods of recording data the learners are likely to use. (2 marks)

d) Explain five ways in which vegetation in the area adopt them -selves to the environment. (10 marks)

10. a) i) what is a lake. (2 marks)
ii) State three sources of lake water. (3 marks) b)
Explain how lakes may be formed by the following processes.
    i) Faulting   (3 marks) ii) Glacial deposits   (3 marks) c) i) State two reasons why Lake Naivasha is fresh.   (2 marks) ii) Explain three ways in which lakes have a positive influence on human activities in Kenya.   (6 marks)
d) Students from Rehema School were to carry out a field study on physical features found in lake Victoria.
    i) State two preparations they would make for the study.   (2 marks) ii) State two reasons why it is necessary to conduct a pre-visit.   (2 marks) iii) State any two problems they are likely to face during study.   (2 marks) **GUCHA SOUTH EVALUATION TEST (GSET)**

Kenya Certificate of Secondary Education
312/2
GEOGRAPHY PAPER 2
SECTION A

Answer ALL questions in this section.

1. a) Differentiate between transport and communication.   (2 marks) b) State THREE disadvantages of road transport. (3 marks)
2. a) Distinguish between market gardening and horticulture.   (2 marks) b) State THREE problems facing horticulture farming in Kenya.   (3 marks)
3. a) Give THREE reasons why Pan-African mill (for pulp and paper) is situated at Webuye .   (3 marks) b)   State TWO problems associated with the Jua Kali sector in Kenya.   (2 marks)
4. a) Define the term overpopulation.   (2 marks) b)   State THREE causes of urban-rural migration.   (3 marks)
5. a) List down any THREE aims of Lambwe valley project.   (3 marks) b) List TWO types of irrigation.   (2 marks)
    SECTION B
    Answer question 6 and any other two questions from this section.
6. The table below shows the value of exports of crops from Kenya between 1997-1998("000 tonnes)

Crop	1997	1998
Tea	24,126	33,065
Coffee	16,856	18,029
Tobacco	1,725	1,554
Totals	42,707	52,648

a) i) Use the data provided in the table above to draw proportional circles. (take a scale of 1 cm to represent 50)   (7 marks)
ii) Give TWO disadvantages of using proportional circles to represent data.   (2 marks) b) State FIVE physical conditions required for the growing of tea in Kenya.   (5 marks)
c) Describe the stages involved in the cultivation of tea from land preparation to harvesting.   (5 marks)
d) Explain THREE problems experienced in small scale tea farming in Kenya.   (6 marks)
7. a) Define the following terms
 Subsidy   (1 marks)
        Balance of trade.   (1 mark)
b) Outline FOUR objectives of COMESA   (4 marks)
c) Explain THREE factors that inhibit trade between Kenya and her neighbours.   (6 marks)
d) What THREE measures has the Kenyan government taken to reduce her unfavorable balance of trade?   (6 marks)
e) Your geography class has been divided into groups of five students each. Each group is to carry out a field study on the suitability of starting a retail business in the nearest market centre.
    i) Give THREE preparations you would make before carrying out the actual field work.   (3 mark) ii) Give TWO reasons why group work will be necessary in carrying out field study.   (2 marks) iii) Cite TWO follow up activities you would carry out after the field study.   (2 marks)
8.   a) i) Define the term „wildlife sanctuaries"   (2 marks) i) Give THREE reasons why game reserves and national parks are located in the marginal areas.   (3 marks) ii) Apart from wildlife, name THREE other tourist attraction found in the Western Kenya circuit.   (3 marks) iii) State THREE ways in which tourist attractions in Kenya differ from those of Switzerland.   (3 marks) b)   Explain how the following factors influence the distribution of wildlife in Kenya.
    i) Vegetation   (2 marks) ii) Altitude   (2 marks) iii) Industrial activity.   (2 marks) c) State FOUR main problems that Kenya faces in her effort to conserve wildlife.   (4 marks)
d)   Outline FOUR negative effects of tourism   (4 marks)
9.   Use the map of East Africa to answer the questions that follow.
a) i) Identify the materials mined in the areas marked W, X Y and Z   (4 marks) ii) Name TWO sea ports through which some of the minerals mined in East Africa are exported.   (2 marks) b) i) State THREE ways in which mining derelicts can be reclaimed.   (3 marks) ii)Explain FOUR ways in which diamond mining contributes to the economy of South Africa.   (8 marks) c) i) What is energy crisis?   (2 marks) ii)Sate FOUR causes of energy crisis in Kenya.   (4 marks) d) i) State TWO problems that affect hydro-electric power production along river Tana.   (2 marks) ii)Give TWO factors which hinder the expansion of Geothermal power production along river Tana.   (2 marks)
10. a) i) Define a forest.   (2 marks)
ii)Name TWO indigenous softwood trees in Kenya.   (2 marks) b)   i)

Explain THREE advantages of planted softwood forest in Kenya. (2 marks) ii)Explain
FOUR problems facing commercial exploitation of tropical hardwood forest. (8 marks)

c)   Compare softwood forest in Kenya and those in Canada under the following headings i)Type
     of trees.
     ii)Method of exploitation.
d)   State THREE methods used by the government of Kenya to conserve the Mau forest.
                                    (3 marks)

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GEOGRAPHY

SECTION A : *Answer **all** the questions in this section.*

1. (a) Differentiate the process of formation of plutonic and volcanic rocks. (2 marks)

   (b) For each of the following rocks, name the resultant rock that forms after metamorphism. (4 marks)
   (i) Mudstone
   (ii) Limestone
   (iii) Graphite
   (iv) Granite

2. (a) What is a lake? (1 mark)

   (b) State **four** ways in which lakes modify the climate of surrounding areas. (4 marks)

3. Explain **two** ways in which climate influences the existence of desert vegetation. (4 marks)

4. (a) List **two** processes involved in physical weathering. (2 marks)

   (b) Identify **three** conditions that may favour occurrence of down wash. (3 marks)

5. (a) Name **two** scales used to measure the intensity of earthquakes. (2 marks)

   (b) State **three** effects of earthquakes on the physical environment. (3 marks)

SECTION B : *Answer **question 6** and any other **two** questions from this section.*

6. Study the map of Migwani 1:50,000 (sheet 121/3) provided and answer the following questions.

   (a) (i) Name the type of map used in this question. (1 mark)

   (ii) Give the estimate location of Kamutungu by latitude and longitude. (2 marks)

   (iii) Give the bearing of the school at grid square 0965 from the water tank in the grid square1169. (2 marks)

   (iv) Measure the distance of the all weather road loose surface running from grid square 9078 to 9083. Give your answer in kilometres. (2 marks)

   (b) Draw a rectangle 14 cm by 7 cm to represent the map to the west of Easting 04 and to the north of Northing 77. On the rectangle, mark and name: (2 marks)
   (i)   all weather road, loose surface. (1 mark)
   (ii) the rock outcrop. (1 mark)
   (iii) Nzeluni dispensary. (1 mark)
   (iv) Itoloni dam. (1 mark)
   (c) Citing evidence from the map, give three social functions of MUTITU (NDOOA) market. (6 marks)
   (d) Explain three problems a contractor would face when constructing a road along Northing 83. (6 marks)

7.   (a) (i) What are earth movements? (1 mark)
   (ii) Describe what happens at a compressional boundary. (6 marks)
   (b) (i) What is faulting? (2 marks)
       (ii) Apart from compressional forces, explain other processes that may cause faulting. (4 marks)
   (c) Using well-labelled diagrams, describe the formation of the Ruwenzori Mountains. (8 marks)
   (d) Explain **four** effects of faulting on the physical environment. (4 marks)

8.   (a) (i) What is a hydrological cycle? (2 marks)
       (ii) State **four** factors that determine the amount of surface run off. (4 marks)
   (b) (i) What is a river? (2 marks)
   (ii) Differentiate between catchment area and watershed.   (2 marks)
   (iii) Identify two types of river erosion. (2 marks)
   (c) (i) Identify five characteristics of a river in its youthful stage. (5 marks)
   (ii) Describe how a river erodes through abrasion. (4 marks)
   (d) Explain the importance of river depositional features to human activities. (4 marks)

9.   (a) (i) What is an artesian well? (2 marks)

(ii) Explain three conditions necessary for the formation of an artesian well. (6 marks)

(b) (i) What is a karst scenery? (2 marks)

(ii) Explain three factors which influence the formation of limestone features. (6 marks) (c) Describe how a stalagmite is formed. (5 marks)

(d) You are supposed to carry out a field study in a karst area.

(i) Give two reasons why you would need a route map. (2 marks)

(ii) Identify two surface features you are likely to see. (2 marks)

10. (a) (i) What is soil? (2 marks)

(ii) Differentiate between bedrock and parent rock. (2 marks)

(b) Explain **four** ways in which topography influences soil formation. (8 marks) (c) What is soil degeneration? (2 marks)

How do the following lead to soil degeneration?

(i) Overgrazing. (4 marks) (ii) Heavy rainfall. (4 marks)

(d) Your class intends to carry out a field study on soil in the school.

State **three** advantages of studying soil through fieldwork. (3 marks)

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Paper 2

SECTION A

*Answer **all** the questions in this section.*

1. (a) Distinguish between land reclamation and land rehabilitation. (2 marks)

(b) State three methods used in land rehabilitation in Kenya. (3 marks)

2. (a) Name the two tourist attractions at the coast of Kenya. (2 marks)

(b) Give three problems associated with tourism in Kenya. (3 marks)

3. (a) Name two methods used for inland commercial fishing in East Africa. (2 marks)

(b) State three factors that favour fishing in Lake Victoria. (3 marks)

4. (a) Define the term „energy crisis‟. (2 marks)

(b) Give three causes of „energy crisis‟. (3 marks)

5. (a) What is urbanization? (2 marks)

(b) State three benefits of urbanization to a country. (3 marks)

SECTION B

*Answer question **6** and any other **two** questions from this section.*

6. (a) The table below shows the number of passengers that used railway transport in selected countries in 1966 and 1977. Use it to answer questions 6 (a) and (b).

COUNTRY	PASSENGERS IN MILLIONS 1966	PASSENGERS IN MILLIONS 1977
Canada	4200	3,000
U.S.A.	27,700	16,600
Argentina	14,100	12,000
India	96,800	163,800
Japan	258,400	311,900

(i) Using a scale of 1 cm represents 20,000 millions passengers, draw comparative bar graph based on the data above. (9 marks)

(ii) State two advantages of using bar graphs in representing data. (2 marks)

(b) Calculate the percentage decline in railway passenger transport in U.S.A. between 1966 and 1977. (2 marks)

(c) Explain three advantages of railway transport over road transport. (6 marks)

(d) Explain three ways through which Kenya has benefited from her international airports. (6 marks)

7. (a) (i) Give three characteristics of horticultural farming in Kenya. (3 marks)

(ii) Apart from floriculture, name two products of horticultural farming in Kenya. (2 marks)

(b) (i) State four advantages of growing flowers in greenhouses in Kenya. (4 marks)

(ii) Outline four problems facing the horticultural industry in Kenya. (4 marks)

(c) Explain three ways in which the Government of Kenya assists nomadic pastoralists to improve the quality of their livestock. (6 marks)

(d) Explain three factors that favour beef cattle farming in Argentina. (6 marks)

8. (a) (i) Name two secondary sources of population data. (2marks)

(ii) Apart from migration, state three factors which influence population growth. (3 marks)

(b) Explain how the following factors influence population distribution in Kenya:

(i) Relief. (4 marks) (ii) Soils. (4 marks)

(c) Explain three effects of rural to urban migration on the source region migrants. (6 marks)

(d) Explain three factors which have contributed to the reduction in fertility rate in Kenya. (6 marks)

9. (a) Name two types of trade. (2 marks)

(b) Explain five factors that influence trade. (10 marks)

(c) Explain four ways in which trade is of significance to Kenya. (8 marks)

(d) State five problems facing trade in Kenya. (5 marks)

10. (a) Describe three ways in which minerals occur.

(b) Explain how the following factors influence the exploitation of minerals.

(i) The size of the deposits. (4 marks)

(ii) Quality of the ore. (4 marks)

(c) (i) Describe how adit mining is carried out. (4 marks)

(ii) Name two other methods of mining. (2 marks)

(d) (i) Apart from gold, name one other leading mineral exploited in South Africa. (1 mark)

(ii) Explain two ways in which South Africa has benefited from mining gold. (4 marks)