312/1
GEOGRAPHY
Paper 1
MARCH/APRIL 2015

MOKASA JOINT EXAMINATION

Kenya Certificate of Secondary Education

312/1

Paper 1

GEOGRAPHY

MARKING SCHEME

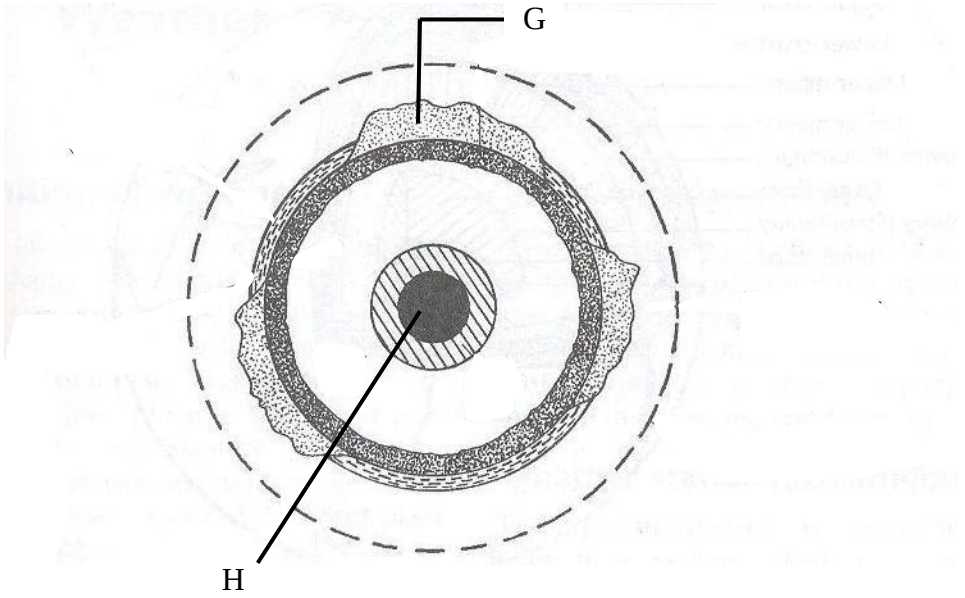
SECTION A

*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) The diagram below shows the internal structure of the earth.



(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*

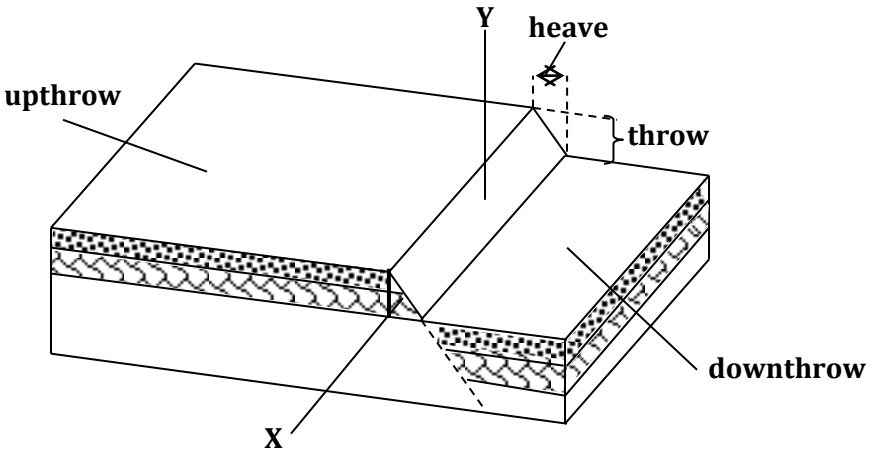
2. (a) Differentiate between absolute and relative humidity. (2 marks)

- *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. The diagram below shows some features formed by faulting. (2 marks)



(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*

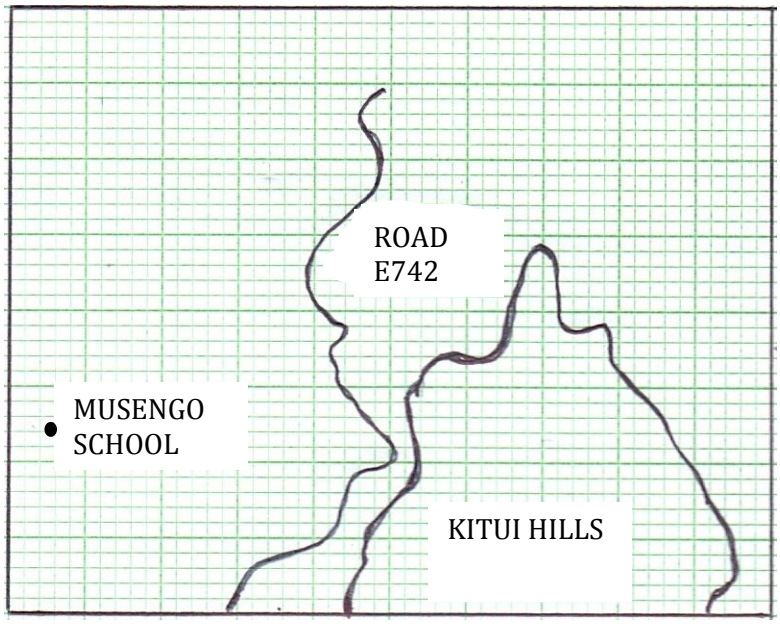
(ii) Give the six-figure grid reference of Mboni dam. (2 marks)

- *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) (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.*

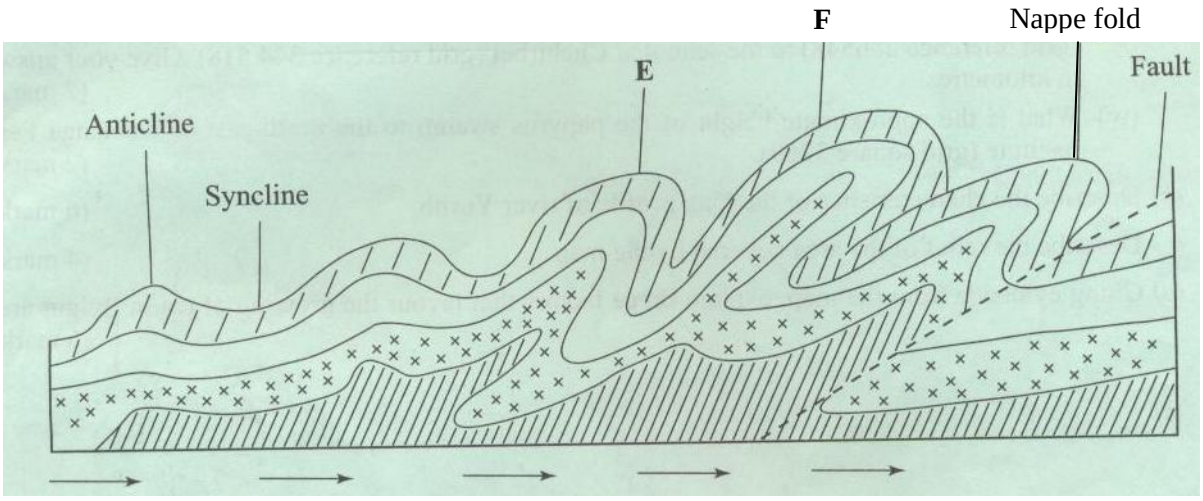
8. (a) (i) What is an orogeny? (2 marks)

- *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.*

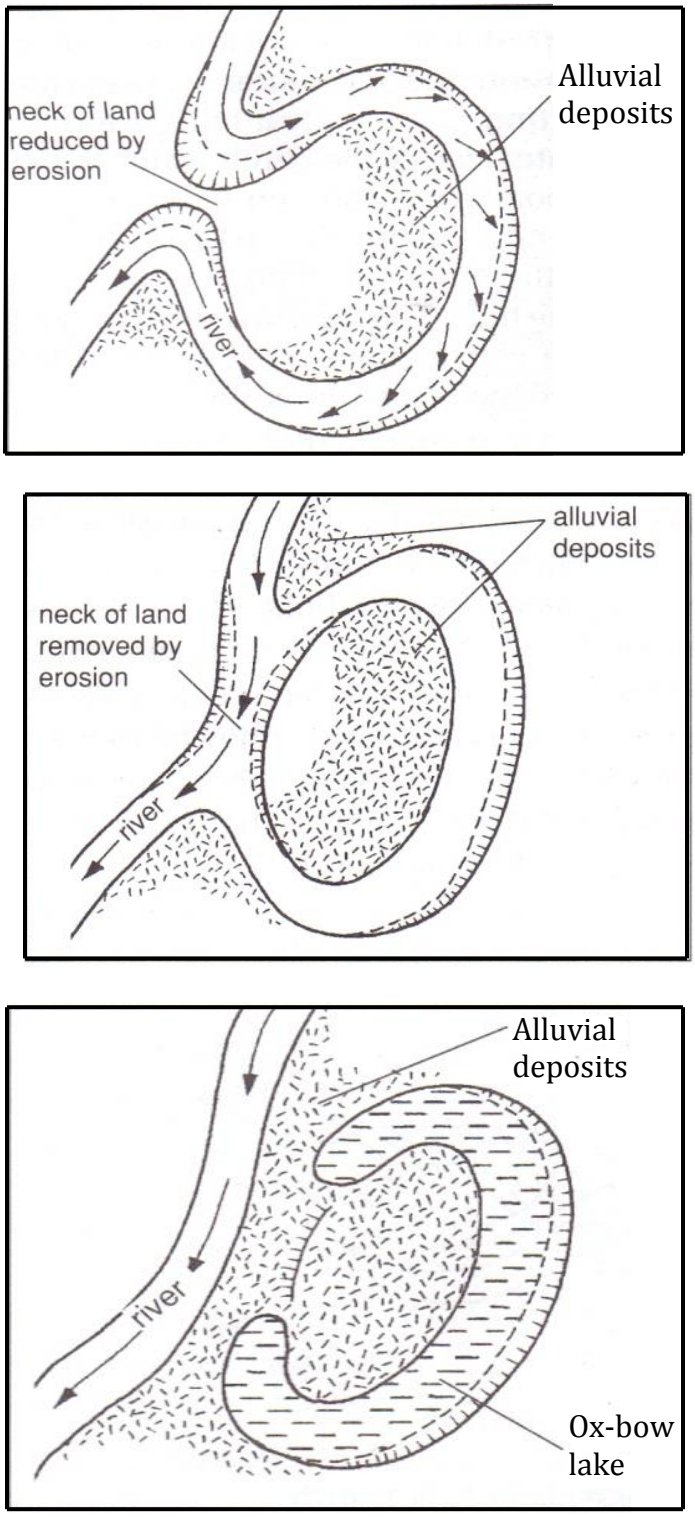
(b) (i) What is a braided channel? (2 marks)

- *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.*

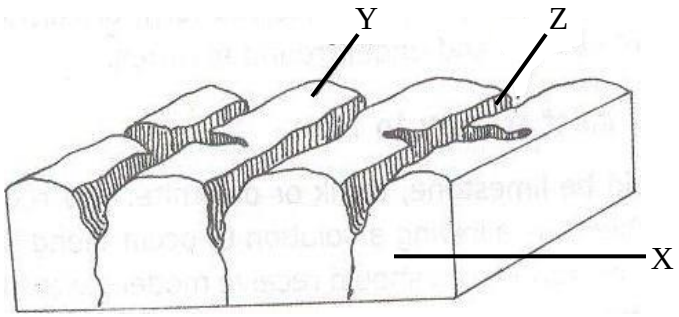
10. (a) What is Karst scenery? (2 marks)

- *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) 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)

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 remain raised 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 lakes*

(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)
   (i) Minerals may occur in beds and seams
   (ii) Minerals may occur as weathered products
   (iii) Minerals may occur in alluvial or placer deposits
   (iv) Minerals may occur in veins and lodes
   (v) 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 make 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)

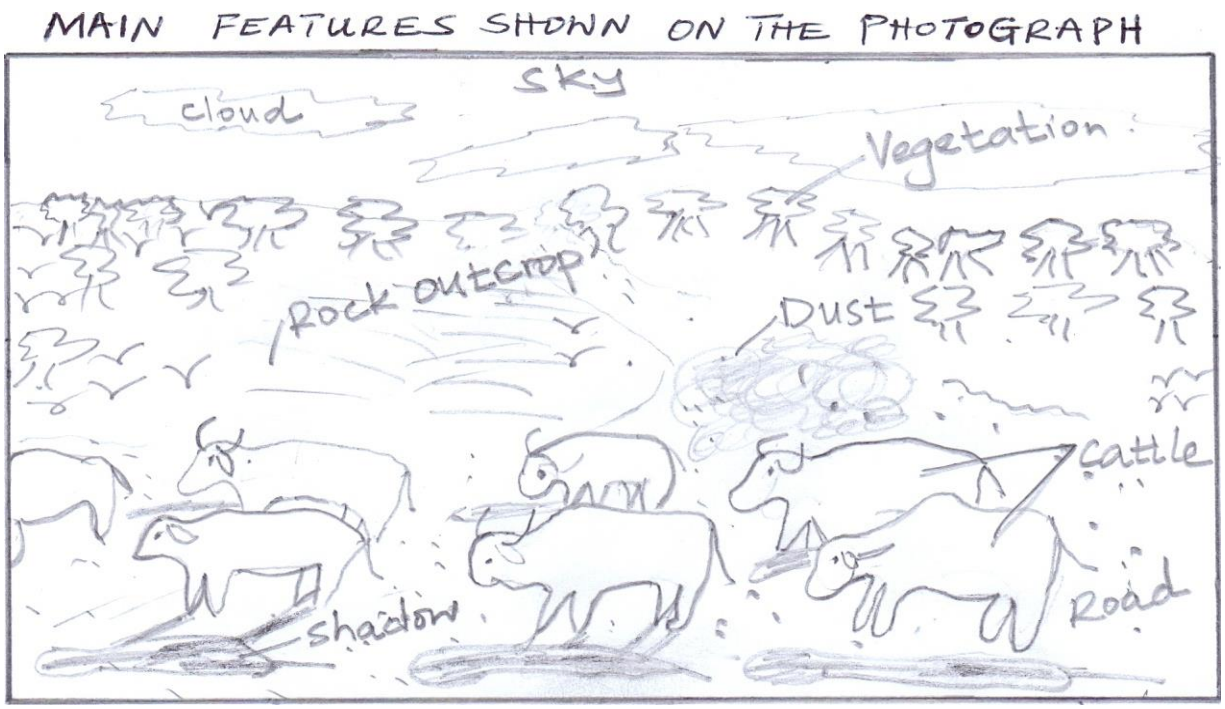
a) (i) Name the type of photograph shown above (1 mark)

- *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 non-governmental 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 ice-covered 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 highlands while in Canada they are found both in highland and lowland areas.*
  In Kenya softwood forests cover a small percentage of the total land 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.*

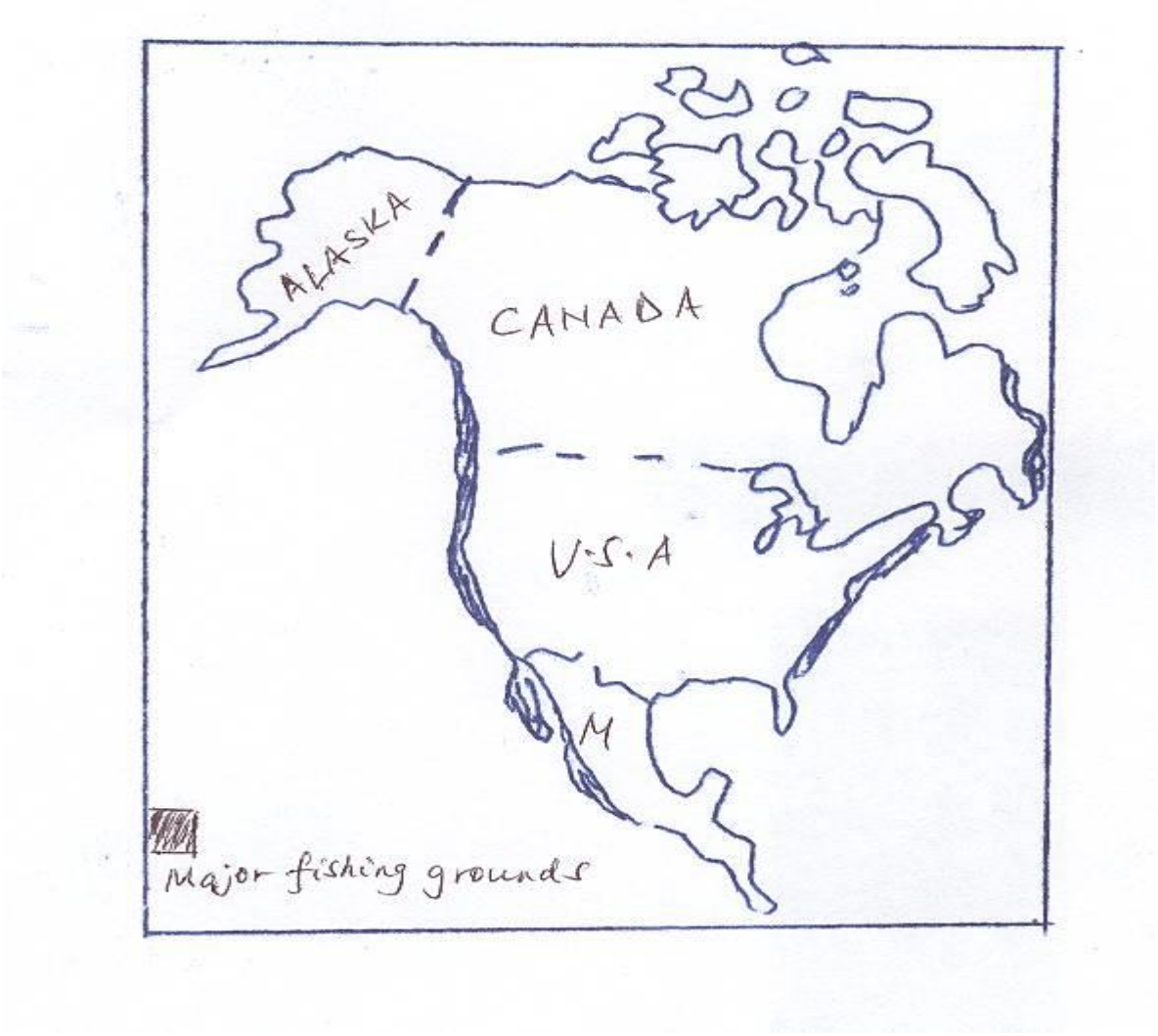
iii) Give three differences between Coffee Farming in Kenya and Brazil (6 marks)

- *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)

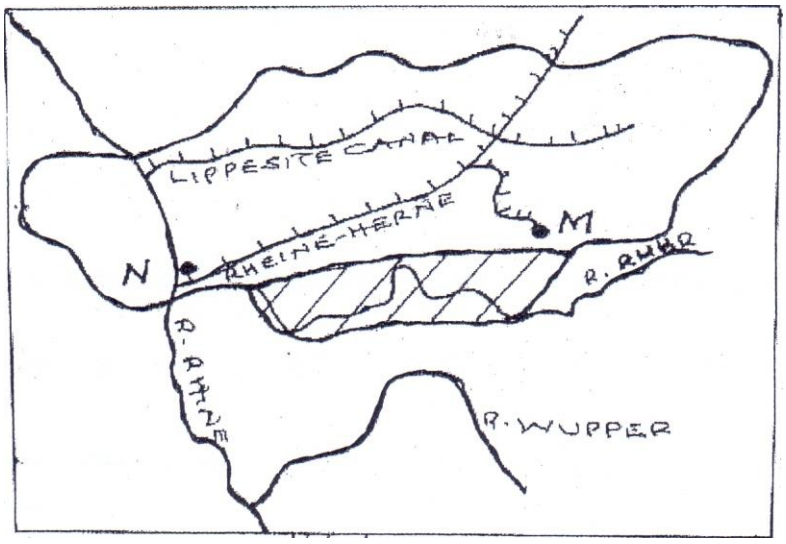
- *Coal has a low calorific value*
- *Coal is dirty to use*
- *Exhaustion of coal*
- *Discovery of oil and other alternative efficient forms of energy*
- *Coal is bulky and thus costly to transport.*
- *It is expensive to mine coal found deep underground.*

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.*

b) 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*

c) Below is a sketch map of the Ruhr Industrial Region. Use it to answer question (i)



(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.*

d) 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.*