Name .... Index Number .... / ....

312/1
GEOGRAPHY
Paper 1
Oct./Nov. 2014
2¾ hours

Candidate's Signature.......................................

Date ....

THE KENYA NATIONAL EXAMINATIONS COUNCIL
Kenya Certificate of Secondary Education
GEOGRAPHY
Paper 1
2¾ hours

Instructions to candidates

(a) This paper has two sections: A and **B**.
(b) Answer **all** the questions in section **A**.
(c) Answer **question 6** and any other **two** questions from section **B**.
(d) All answers must be written in the answer booklet provided.
(e) This paper consists of 6 printed pages.
(f) Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.
(g) Candidates should answer the questions in English.
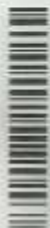
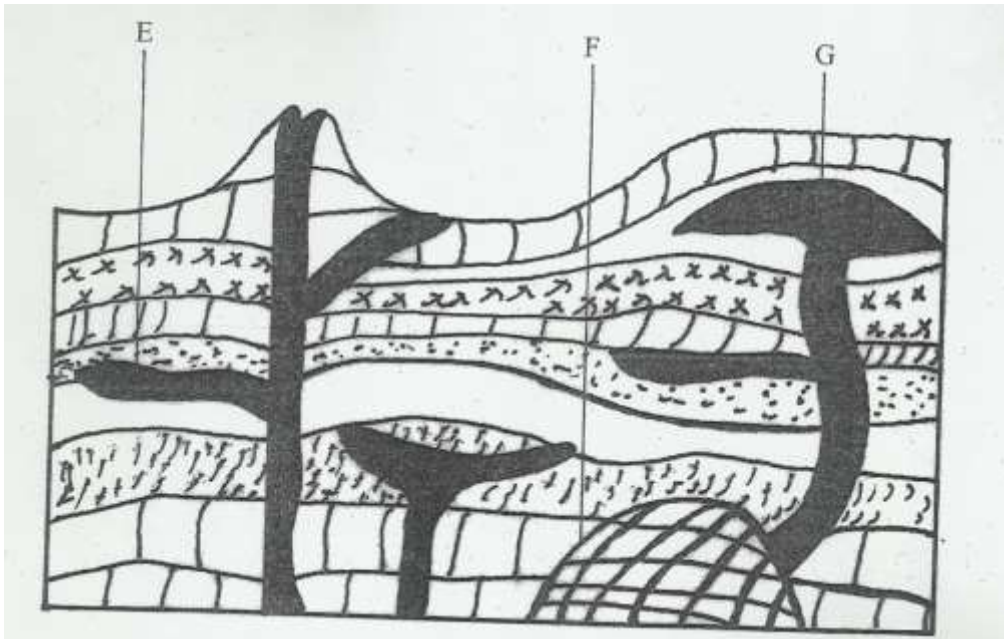1.   Name **two** types of hypabyssal rocks.   (2 marks)

2 .   (a)   The diagram below shows intrusive volcanic features.

        Name the features marked **E, F** and **G.**   (3 marks)

    b)   Name **two** active volcanoes in Kenya.   (2 marks

3   (a)   Give **three** processes in the hydrological cycle.   (3 marks)

    (b)   State **four** factors that facilitate **deposition** in rivers.   (4 marks)

4(a) Explain **two** reasons why wind is the dominant agent of erosion in arid areas. (4 marks)

   (b)Identify **two** features formed as a result of wind deposition in arid areas.   (2 marks)

5   (a)Describe podzolization as a process of leaching.   (2 marks)

    (b)State **three** ways in which mulching helps in soil conservation.   (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 following questions.
   (a)   (i)   Give the longitudinal extent of the area covered by the map.   (2 marks)

          (ii)   What is the magnetic variation of the map?   (1 mark)

          (iii) Give the six-figure grid reference for the junction of the roads D503 and D507.
                                                                                                    (2 marks)
   (b)   (i)   Using a vertical scale of 1 cm to represent 100 metres, draw a cross section along the line
                 marked J-K. (4 marks)
          (ii)   On it, mark and label the following:
                 • footpath;   .   (1 mark)
                 • road   (1 mark)
                 • water pipeline; .   (1 mark)
                 • steep slope. .   (1 mark)

          (iii) Calculate the vertical exaggeration of the cross-section. (2 marks)

   (c)   Citing evidence from the map, give **three** economic activities carried out in the area
          covered by the map.   (6 marks)

   (d)   Explain how relief has influenced the distribution of settlement in the area covered by
          the map.   (4 marks)

7   (a)   (i)   Describe the solar system.   (2 marks)

          (ii)   The local time at Manaul 60°W is 11.30 a.m. What is the time in Nairobi 37°E?
                                                                                    (3 marks)

   (b)   (i)   State **five** characteristics of the mantle in the interior structure of the earth.
                                                                                    (5 marks)
          (ii)   Outline the evidence which support the theory of continental drift. (4 marks)

   (c)   The diagram below represents the revolution of the earth.
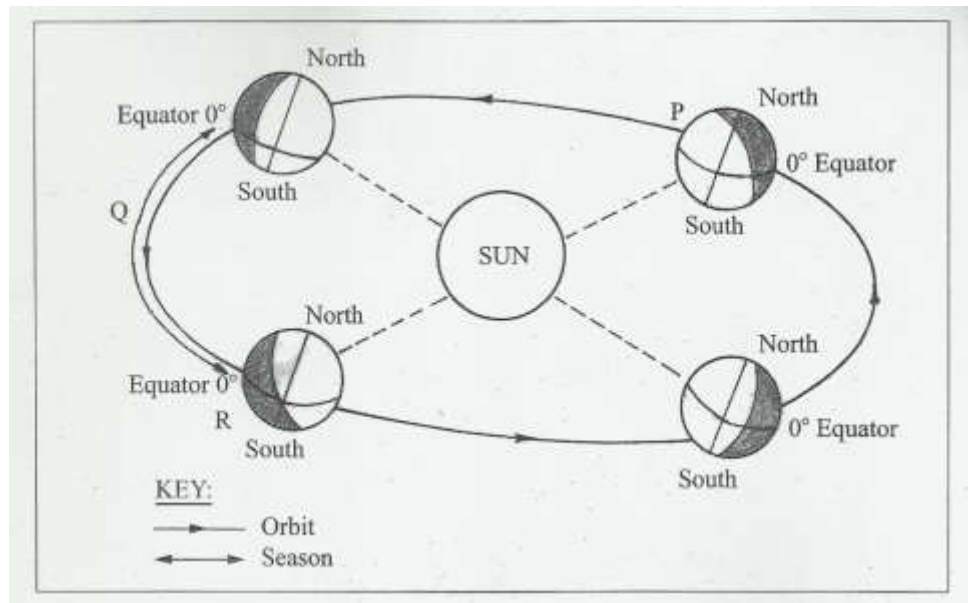
(i)   Name the solstice marked P.   (1 mark)

(ii)   Identify the season represented in the region marked Q.   (1 mark)

(iii)   Describe the climatic conditions in Europe when the Earth is in position R.
                                                                                             (3 mark)

(d)   With the aid of a well labelled diagram, describe the occurrence of the solar eclipse.
                                                                                             (6 marks)

8.The map **below** shows some climatic regions of Kenya. Use it to answer question (a).
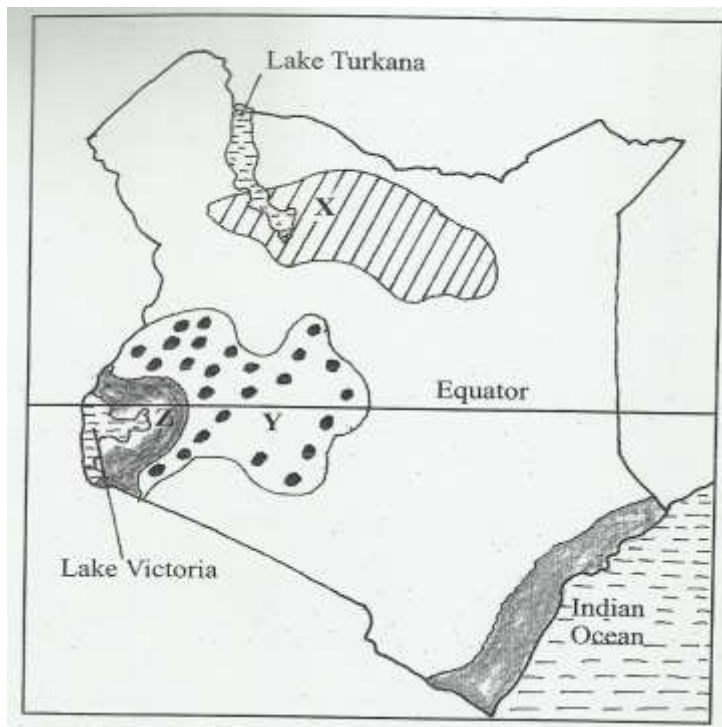
(a) (i)   Name the climatic regions marked X and Y.   (2 marks)

  (ii)   State **three** characteristics of the climatic region marked Z.   (3 marks)

(b) Explain how each of the following factors influence climate:
   (i)   Altitude;   (4 marks)

  (ii)   Ocean currents.   (4 marks)

(c) What are the negative effects of climate change on physical environment?   (6 marks)

(d) Students visited a weather station to study recording of weather elements.

   (i)   State three qualities in the construction of a Stevenson screen they would have
          observed during the study.   (3 marks)

  (ii)   Identify **three** types of data they are likely to have collected during the study.(3 marks)

9   (a)   (i)   Name **two** types of submerged highland coasts.   (2 marks)

              (ii)   Identify **two** resultant features of submerged highland coasts.   (2 marks)

       (b)   State **three** factors influencing deposition by ocean waves   (3 marks)

       (c)   With the aid of labelled diagrams describe the formation of the following coastal features:
              (i)   Fringing reef;   (5 marks)

              (ii)   Spit.   (5 marks)

    (d)   Explain the significance of oceans to human activities.   (8 marks)

10   (a)   (i)   Name **two** mountains in East Africa which are ice capped.   (2 marks).

              (ii)   Identify **three** ways in which ice moves.   (3 marks)

       (b)   Describe the formation of the following glacial features: .
              (i)   Hanging valley;   (6 marks)

              (ii)   Pyramidal peak.   (6 marks)

      (c)   You are required to carry out a field study on erosional features in glaciated lowland area.

              (i)   Give **two** reasons why you would require a working schedule.   (2 marks)

(ii)   Name **three** erosional features you are likely to observe during the field study.(3 marks)

(iii)   Give **three** follow-up activities you would undertake after the field study.   (3 marks)

THE KENYA NATIONAL EXAMINATIONS COUNCIL
Kenya Certificate of Secondary Education
GEOGRAPHY
Paper 2
2¾ hours

Instructions to candidates

(a) This paper has **two** sections; **A** and **B**.

(b) Answer **all** the questions in section **A**.

(c) Answer question **6** and any other **two** questions from section **B**.

(d) All answers must be written in the answer booklet provided.

(e) This paper consists of 7 printed pages.

(f) Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

(g) Candidates should answer the questions in English.
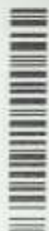
*Answer **all** the questions in this section.*

1. (a)   Give two uses of diamond.   (2 marks)

    (b)   Identify **three** problems facing diamond mining in South Africa.   (3 marks)

2. (a)   Apart from coniferous forests, name two other types of natural forests.   (2 marks)

    (b)   State **three** characteristics of coniferous forests which favour their exploitation.(3 marks)

3.   Use the map of East Africa below to answer question (a).
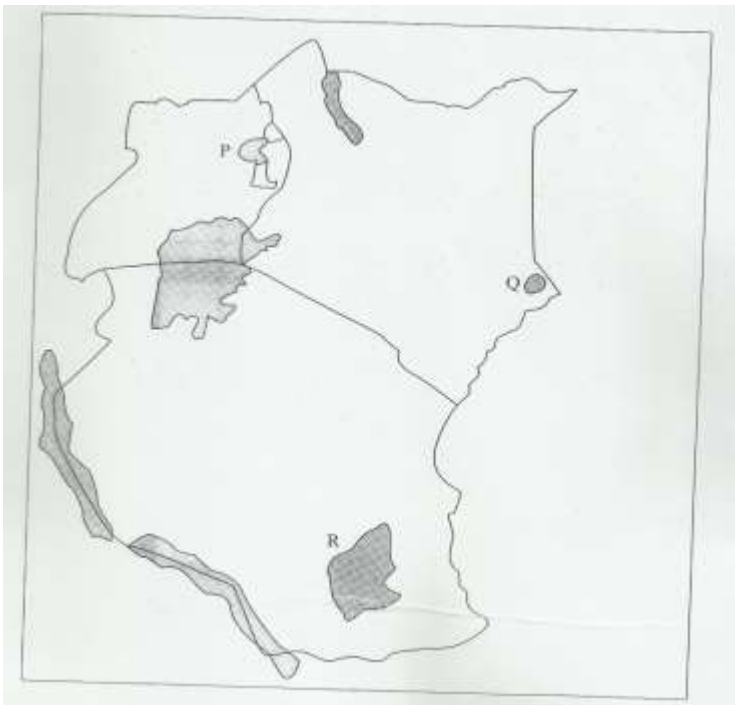
    (a)   Name the game reserves marked **P. Q** and **R**. (3 marks)

    (b)   State **two** factors which influence the distribution of wildlife in East Africa.   (2 marks)

4. (a)   Give **two** reasons why Geothermal power has not been fully exploited in Kenya.(2 marks)

    (b)   State **three** causes of the energy crisis in the world. (3 marks)

5. (a)   Identify the **two** types of internal trade. (2 marks)

    (b)   Give **three** factors that limit trade among the member states of the common market for Eastern and Southern Africa (COMESA). (3 marks)

6   Study the photograph below and use it to answer question (a)
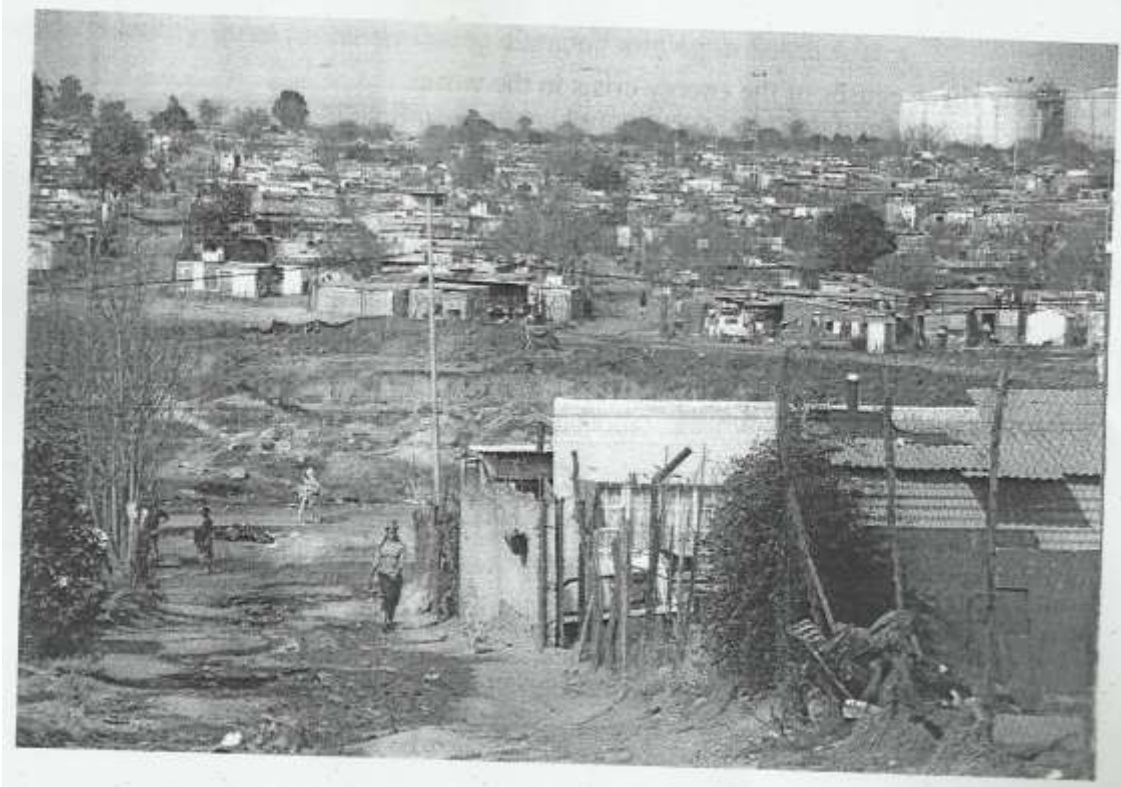
(a) (i) Identify the type of photograph shown above.   (1 mark)

    (ii) Name the type of settlement shown on the photograph.   (1 mark)

    (iii) What time of the day was the photograph taken?   (1 mark)

    (iv)   Draw a rectangle measuring 15 cm by 10 cm. On it, sketch and label **five**
           human features shown on the photograph.   (6 marks)

(b)   Explain **four** economic factors that influence settlement.   (8 marks)

c)   Describe **four** negative effects of urbanization.   (8 marks)

7. (a)   Explain **three** social factors that influence agriculture.   (6 marks)

  (b)   (i)   Describe the cultivation of oil palm from land preparation to harvesting.(7 marks)

       (ii)   Give **three** uses of palm oil in Nigeria.   (3 marks)

  (c)   Explain **three** reasons why horticultural farming is encouraged in Kenya. (6 marks)

  (d)   Give **three** factors which favours beef farming in the Nyika plateau. (3 marks)

8. (a)   Explain **four** ways in which land is being rehabilitated in Kenya.   (8 marks)

   (b)   (i)   State two ways in which the salinity of the polders is reduced in The Netherlands.
                                                                                              (2 marks)

          (ii)   Explain **four** ways in which the Zuyder Zee project benefits The Netherlands.
                                                                                              (8 marks)

   (c)   You intend to carry out a field study on irrigation farming in Mwea Tebere Irrigation Scheme:

          (i) Identify the two types of hypotheses you would develop for the study.   (2 marks)

          (ii) Name three crops, grown in the scheme that you are likely to identify.   (3 marks)

          (iii) Give two reasons why you need to sample the area of study.   (2 marks)

9. (a)   Define the term fishing.   (2 marks)

   (b)   Explain **two** ways in which each of the following factors negatively affects fishing in Kenya.
          (i)   Agricultural activities.   (4 marks)

          (ii)   Water weeds.   (4 marks)

   (c)   Use the map of North-West Atlantic fishing ground to answer questions (c)(ii) and (iii).
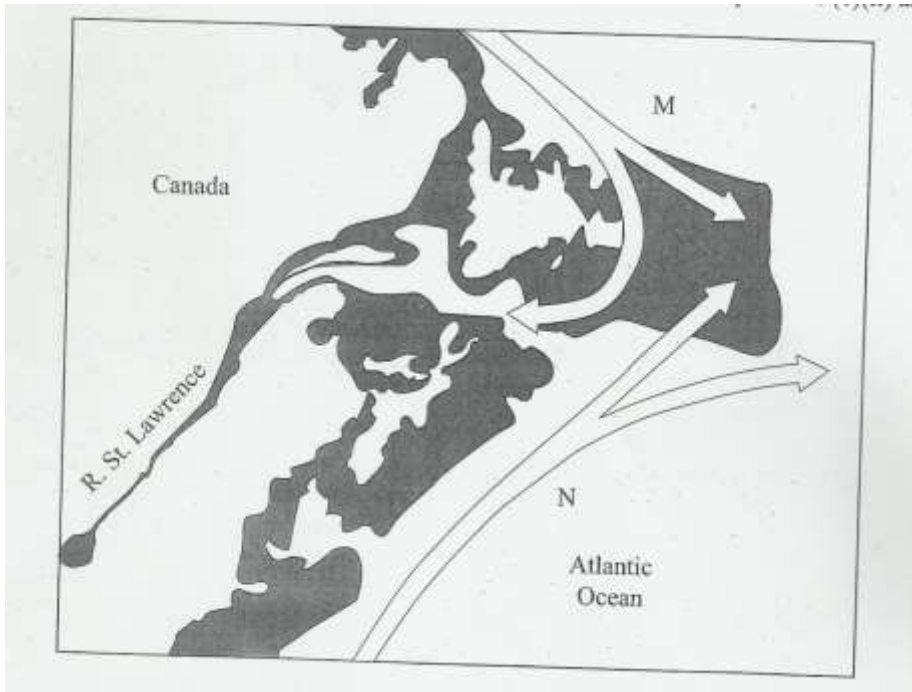
          (i) Give **three** types of fish species caught in the North-West Atlantic fishing ground.   (3 marks)

          (ii)   Name the Ocean currents marked **M** and **N**.   (2 marks)

          (iii)   Explain **two** ways in which the convergence of Ocean currents marked **M** and **N**
                   influence fishing.   (4 marks)

(d)   Give **three** differences between fishing in Kenya and Japan.   (6 marks)

10 (a) What is environmental management?   (2 marks)

  (b) (i)   Explain **four** negative effects of floods.   (8 marks)

     (ii)   State **two** measures being taken to control lightning.   (2 marks)

  (c) Explain the significance of conserving the environment.   (8 marks)

  (d) Your Geography class carried out a field work on floods along a river.
       (i)   Name **two** types of field work they could have used.   (2 marks)

      (ii)   Give **three** advantages of studying floods through field work.   (3 marks)

KENYA NATIONAL EXAMINATION COUNCIL
Kenya certificate of secondary education

GEOGRAPHY

Paper 1

MARKING SCHEME
(CONFIDENTIAL)

SECTION A

1. Name two types of hypabyssal rocks.

   - Dolerite
   - Porphyry
   - Diabase
   - Lamprophyre
   - Porphyrite
   - granophire

2. (a) The diagram below shows intrusive volcanic features.
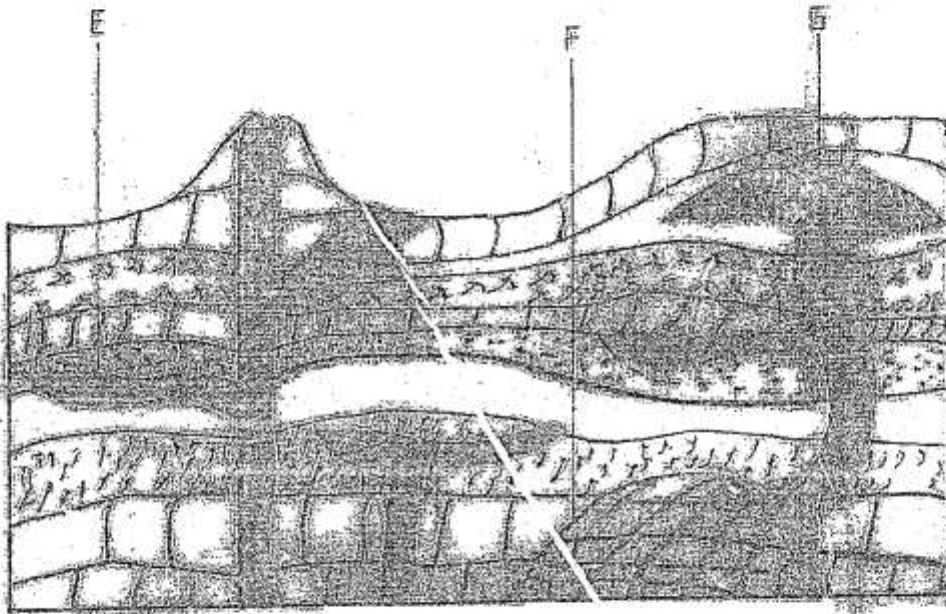
   Name the features marked E, F and G.

   E - A sill
   F - A batholic Batholic
   G - A laccolith / Bacooia

   (3 marks)

   (b) Name two active volcanoes in Kenya.

   - Longonot
   - Teleki
   - Likaiyu/ Likaiu
   - Suswa
   - Menengai
   - Homa Hills

(a)   Give three processes in the hydrological cycle.

- Evaporation/ evapotranspiration / moist air rising
- Condensation / moist air cooling
- Infiltration/ percolation
- Surface runoff/ overland flow
- Precipitation

(b)   State four factors that facilitate deposition in rivers.

- Reduction in river gradient which decreases the velocity of water.
- Freezing of river water leads to embedments of the load in the ice.
- River entering a large/water body reduces the speed of the river flow.
- Presence of obstacles on the river course which blocks some of the load.
- Reduction in river volume which reduces the strength of the river.
- Increase in width of the channel makes water to spread over wide area.
- increase in the amount (size of the load)   Any 4 x 1 = (4 marks)

* Mark all it – continuous phase *

(a)   Explain two reasons why wind is the dominant agent of erosion in arid areas.

- The areas have scanty/ no vegetation which exposes the land to erosion.
- The areas experience strong tropical winds which erode the materials.
- The areas have dry unconsolidated soils/ materials which are easily eroded.
                                                         Any 2 x 2 = (4 marks)

(b)   Identify two features formed as a result of wind deposition in arid areas

sand dunes/ seif dunes or longitudinal dunes, barchans, wake/ transverse dunes
- Loess
- drass/ draas

(a)   Describe podzolization as a process of leaching.

- It occurs in areas with high rainfall and low temperatures/cool and wet climates/ (cool temperate regions/humid temperate regions/coniferous forest covered areas.
- Slow decomposition of vegetation matter results in formation of humus acid
- Minerals such as iron/ iron oxides/ aluminium/ and various carbonates in the soil are dissolved and moved/ removed from the horizon
- This leaves the soil extremely acidic/humic/ash grey/light in colour/ grey brown/red-yellow/white.   Any 4 x½ = max 2

(b)   State three ways in which mulching helps in soil conservation.

- Plant materials used decompose increasing soil humus.
- It protects the soil against erosion.
- It helps to increase infiltration rate of water into the soil/ cultivation.
- It helps reduce water loss from the soil/ retains soil moisture.

SECTION B

6. Study the map of Migwani (1:50 000) sheet 151/1 provided and answer the following questions:

   (a) (i) Give the longitudinal extent of the area covered by the map.

   ✓ 38.01'E - 38.13'E / 38° 00' 30" E - 38° 13' 30" E
      12' ± 30" (11'30' - 12'20")
      > 38° 00' - ≤ 38° 01' to 38°13' - <38°14' (2 marks)

   (ii) What is the magnetic variation of the map?

   2°24' 2°23'

   (iii) Give the six figure grid reference for the junction of the roads D503 and D507.

   ✓ 119707 / 119708

   (2 marks)

   (b) (i) Using a vertical scale of 1 cm to represent 100 metres, draw a cross section along the line marked J - K.

   (ii) On it mark and label the following:

   - footpath
   - road   (1 mark)
   - water pipeline   (1 mark)
   - steep slope   (1 mark)
                                                    (1 mark)

   Features

   Footpath
   Road   (1 mark)
   Water pipeline   (1 mark)
   Steep slope   (1 mark)
                                                    (1 mark)

b (i)   A cross-section along line K

Steep   Steep   Foot-path   Water   Road   Footpath   Footpath
slope   slope   pipeline in sla

1600
1500
1400
300
200
100
Q20
000

900

300

700
600

V H   K

Title   = 1 mark
Trend   = 2 marks
Labelling vertical axis = 1 mark
                 Total   = 4 marks

(ii)   Facilities
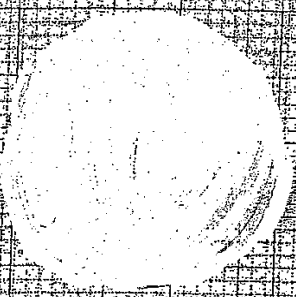
Foot-path   = 1 mark
Road   = 1 mark
Water pipeline = 1 mark
Steep slope   = 1 mark
        Total = 4 marks

NB, using scale; no work out needed
to work [ ] SP and EP.

J/1 MS

Turn over

(iii) Calculate the vertical exaggeration of the cross section

$$V.E = \frac{V.S}{H.S}$$

$$= \frac{1}{10,000} \div \frac{1}{50,000}$$

$$= \frac{1}{10,000} \times \frac{50,000}{1}$$

$$= 5$$

NB: Calculation ~~1 mark~~
Answer ~~1 mark~~
~~(2 marks)~~

(c) Citing evidence from the map, give three economic ~~ac~~ ~~the area~~ covered by the map.

A
- Transport as evidenced by presence of many roads.
- Trade evidenced by presence of many shops
- Communication evidenced by post office
- ~~Livestock keeping evidenced by a dip.~~

Activity can score without evidence but E 3
not vice versa.   A 3

Any 3 x 2 = (6 marks)

(d) Explain how relief has influenced the distribution of settlement in the area covered by the map.

- There are many settlements in the north western part because the land is gently sloping
- There are no settlements in mountains because the slope is too steep
- There are few settlements on Kihu hills as the rains is very heavy

- Explain -

7. (a) (i) Describe the solar system

It is the sun, planets and other celestial bodies held together by the force of gravity
- the celestial body revolve orbit, the sun
- not celestial body are spherical in shape

(ii) The local time at Manau, 60°W is 11.30 am. What is the time in Nairobi 37° E?

• The difference in longitude is $60 + 37 = 97°$

• $1° = 4$ minutes

∴ $97° = \left(\frac{97 \times 4}{60}\right)$ hrs
= 6 hrs 28 mins

Time in Nairobi = 1130
+628
1758 hrs or

5.58 pm ✓ ⅞

(b) (i) State five characteristics of the mantle in the interior structure of the earth.

- The mantle is divided into two parts mainly ✓ the upper mantle and the lower mantle.
- It is about 2900 km thick. ✓
- The average density is between 3.0 - 4.0 ³·³ gm/cm³ ✓
- The upper mantle has a lower temperature than the lower mantle. ✓ 1000°c –
- The upper mantle is in semi-solid state. ✓ viscous-fluid ✓ 3500°c
- The lower mantle is composed of rocks in liquid state.
- The dominant minerals are iron and magnesium. ✓ ferromagnesium silicate
   olivine ..   Any 5 x 1 = (5 marks)
   5

* * *

(ii) Outline the evidence which support the theory of continental drift.
   - Palaeozoology, palaeontological evidence (
   - The fossils of plants/ animals found in Africa are also in other continents.
   - Adjacent continents have similar coastlines. jigsaw fit of continental margin.
   - There exists similarity in animal species/ plant species in the continents.
   - Similar climate occurs along the same latitude in different continents.
   - Southern continents seem to have experienced large scale glaciation at the same period / presence of ancient glacial deposits —
   - Sea floor spreading/ Recent volcanic eruption in mid-Atlantic ridges fill the gaps left by drifting continents.

   Any 4 x 1 = (4 marks)

- The location of major fold mountains of the world and the trend of folds / ...

- Palaeomagnetism (the alignment of the iron minerals in the igneous rocks along the earth's magnetic fields ... and the continents must have been once together.)

- Geological evidence (existence of rocks which are similar in their formation / structure / type / age along margins of different continents (sharing an ocean).

4 | 9

Time in Nairobi = 1130
               +628
          1758 hrs or

          5.58 pm ✓

3 5

(b) (i) State five characteristics of the mantle in the interior structure of the earth.

- The mantle is divided into two parts mainly/the upper mantle and the lower mantle.
- It is about 2900 km thick. ✓
- The average density is between 3.0 - 4.0 gm/cm³   (3.3)
- The upper mantle has a lower temperature than the lower mantle. ✓ 1000°c –
- The upper mantle is in semi-solid state. ✓ viscous fluid ✓ 3500°c
- The lower mantle is composed of rocks in liquid state.
- The dominant minerals are iron and magnesium. ferro magnesium silicate
                                        olivine ..
                                        Any 5×1 = (5 marks)
                                                          5

* * *

(ii) Outline the evidence which support the theory of continental drift.
- Palaeozoologial / palaeontological evidence
- The fossils of plants/ animals found in Africa are also in other continents.
- Adjacent continents have similar coastlines. Continental margin.
- There exists similarity in animal species/ plant species in the continents.
- Similar climate occurs along the same latitude in different continents.
aeoclimate / Southern continents seem to have experienced large scale glaciation at the same period / presence of ancient glacial deposit —
sea floor spreading / Recent volcanic eruption in mid-Atlantic ridges fill the gaps left by drifting continents.
                                        Any 4×1 = (4 marks)

- The location of major fold mountains of the world/
  the trend of folds / geology the base of mountain similar.
- Palaeomagnetism / the alignment of the iron-
  minerals in the igneous rocks along the earth's
  magnetic fields indicated that the continents
  must have been once together.
- Geological evidence / existence of rocks which
  are similar in their formation / structure / type /
  age along margin of different continents
  (sharing an ocean).

                                        4 9

(c)   The diagram below represents the revolution of the earth.

KEY :

———►—— Orbit
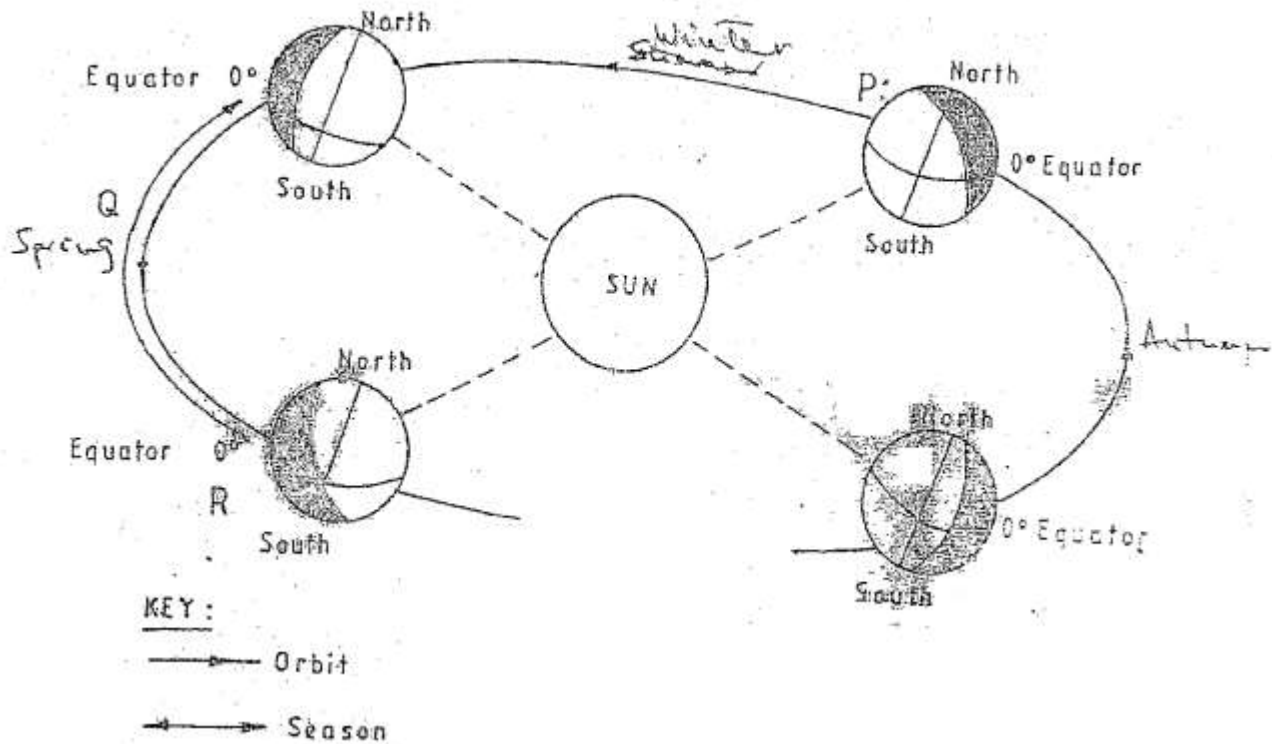
—◄———►— Season

(i)   Name the solstice marked P.

Winter solstice   (1 mark)

(ii)   Identify the season represented in the region marked Q.

Spring.   (1 mark)

(iii)   Describe the climatic conditions in Europe when the area is in position R.

- High temperatures are experienced/ hot conditions are experienced
- There are long hours of sunshine.
- There is precipitation in form of rainfall/ wet conditions
- There is high humidity
- There is low pressure
- There is convergence of winds.
- It is cloudy   Any 3×1   (3 marks)

(d)   With the aid of a well labelled diagram, describe the occurrence of the solar eclipse.

- It occurs when the moon lies between the earth and the sun,
- The shadow of the moon is cast on the earth's surface.
- The shadow has two parts namely the umbra and penumbra.
- The umbra shadow causes total solar eclipse.
- The penumbra causes partial solar eclipse.

Sun   Moon   Earth

                                                             Umbra

                                                    Penumbra
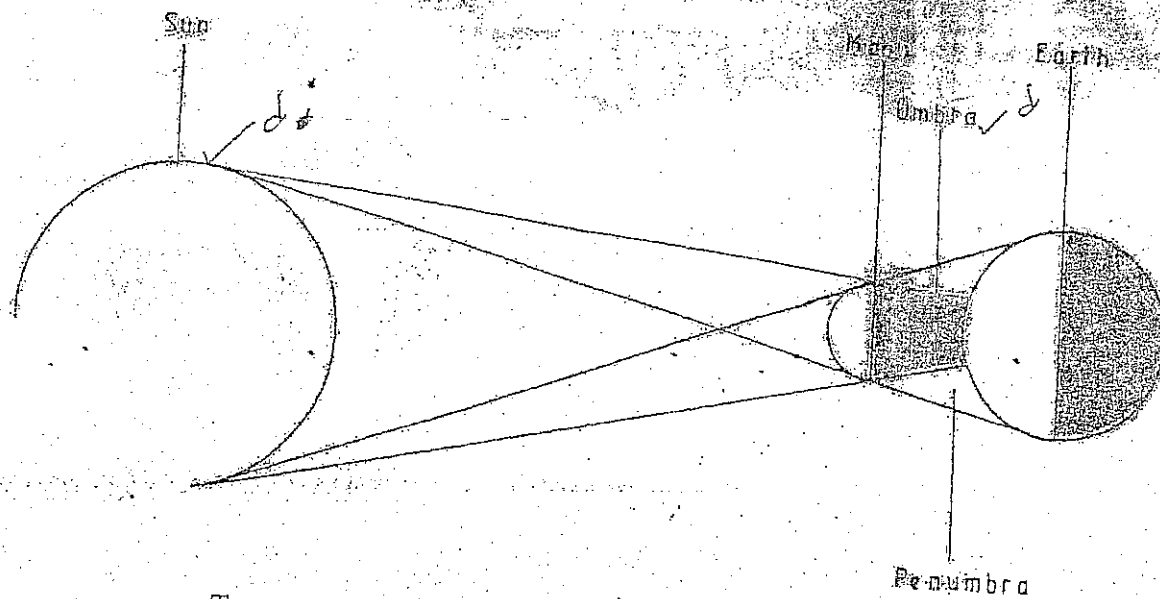
Text ———— 4 marks
Diagram ——— 2 marks
Total ——— 6 marks

The map below shows some climatic regions of Kenya. Use it to answer question (a).
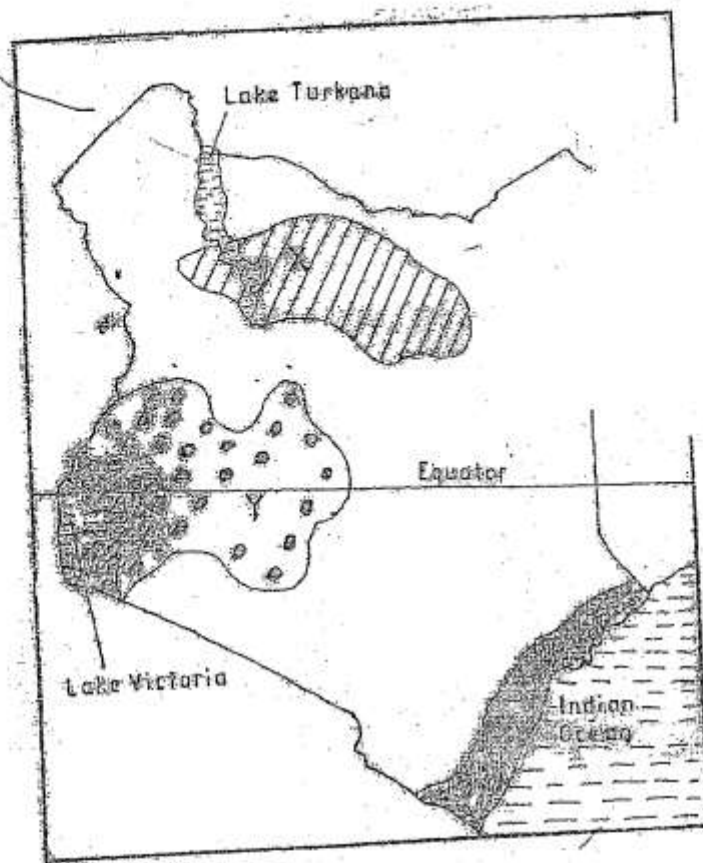
(a) (i) Name the climatic regions marked X and Y.

X - Desert climate
Y - Modified tropical climate

(ii) State three characteristics of the climatic region marked Z
- It has a mean annual temperature of between 20° C and
- Rainfall ranges between 750 mm and 1500 mm per year with no distinct dry
month. / rains throughout the year
- The relative humidity is high / 80%
- The area receives convectional type of rainfall.

Any 3 × 1 = (3 marks)

3/5

(b)   Explain how each of the following factors influence climate.

(i)   Altitude.

- Temperature decreases with increasing height above sea level/ decreases at
  0.6°C for every 100 metres rise because the heat loss is greater at higher
  altitude than lower altitude.

* Atmospheric pressure is higher at low altitude and lower at high altitude. This
  is because the weight of atmospheric air at low altitude is more than at high
  altitude. √E

- The temperature is higher at low altitude because the air is heated from below
  and not directly from the sun.

Statement can score without
action and not vice versa

S Swap 2   Any 2×2 = (4 marks)
E 3 = or 2

∴ currents

...shore winds blowing over a warm ocean current are warmed and upon
...eaching the coastland they cause a warming effect. √
Onshore winds blowing over cold ocean currents are cooled and on reaching the
adjacent coastland they cause a cooling effect. √
Onshore winds blowing over warm ocean currents are warmed absorbing more
water vapour and on reaching the adjacent coastland result to increased rainfall
and increased humidity. √
Onshore winds blowing over cold ocean currents are cooled and condensed
resulting to rain falling over the ocean and on reaching the adjacent coastland
result to little or no rain/fog/mist.

Any 2 × 2 = 4   8
Any 2 × 2 = (4 marks)

8 (c)   What are the "negative effects" of climate change on physical environment?

√

- Flooding of land/coast lands caused by increased temperature leads to melting of
  glaciers resulting to a rise in sea level/change in rainfall pattern/change in
  seasonal pattern/change in winds or air masses pattern.
- Drought caused by increased temperatures resulting to high evaporation/change
  in rainfall pattern/change in seasonal pattern.
- Disruption of natural ecosystems/loss of biodiversity/abnormal growth of plants
  caused by change in seasonal pattern/rainfall pattern/global warming/increased
  ultraviolet radiation.
- Drying up of water reservoirs (there by reducing their lifespan) may be caused by
  increased temperature. resulting to high evaporation/Change
  in rainfall pattern
- Soil erosion by water due to increase in rainfall/soil erosion by wind caused by
  change in wind/air masses pattern.
- High ocean/sea waves/sea storms due to change in wind/air masses pattern when
  they blow more frequently and are more destructive (such as cyclones).

Any 3 × 2 = (6 marks)

c - 6 when 3 }
c - 6 more 3 }

NB: The effect can score alone but

(d) Students visited a weather station to study recording of weather elements.

(i) State three qualities in the construction of a stevenson screen they would have observed during the study.

- It is a wooden box.
- It is raised on stilts/ placed on a stand, about 121 cm above the ground level.
- It is painted white.
- It has a double roof.
- The sides are louvred to allow free circulation of air

Any 3 x 1 = (3 marks)
3

(ii) Identify three types of data they are likely to have collected during the study.

- Types of weather measuring/ recording instruments
- Statistical data/ on previous weather records.
- Diagrams/ photographs on instruments.
- Information on weather forecasting

Any 3 x 1 = (3 marks)
3

9. (a) (i) Name two types of submerged highland coasts.

- Longitudinal/ Dalmatian
- Ria
- Fiord /Fjord

Any 2 x 1 = (2 marks)

(ii) Identify two resultant features of the emerged highland coasts.
- Raised seal blow hole
- Raised cliffs
- Raised wave cut platforms.
- Raised beaches
- Raised cave
- Raised arches / stack

(b) State three factors influencing deposition by ocean waves.

- The existence of gentle sloping shore.
- Presence of shallow water along the coastline.
- The occurrence of a strong swash and weak backwash/ constructive waves
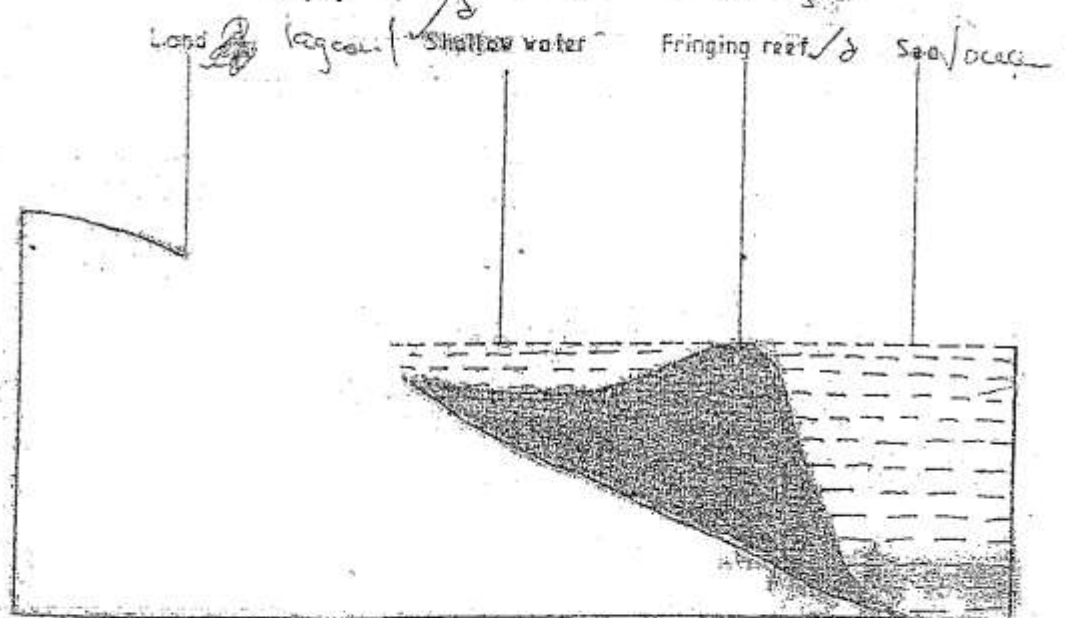- The existence of indented coastline.

Any 3 x 1 = (3 marks)
3 3

(c) With the aid of labelled diagrams describe the formation of the following coastal features.

(i) Fringing reef.

1) - It is formed when coral polyps start accumulating near the shore extending seawards.

2) - The rate of accumulation is faster seawards than towards the shore.

3) - The accumulated materials form a fringing reef.

4) - The reef therefore becomes steeper seaward than towards the shore, enclosing a warm and shallow lagoon.

Land   lagoon   Shallow water   Fringing reef   Sea/ocean.

NB: For the lagon to Score, the reef/area must be Shown.

$\begin{bmatrix} T & S & mark & 3 \\ \partial & \frac{z}{\hat{z}} & & 2 \end{bmatrix}$

Text = 3 marks
Diagram = 2 marks
(Total = 5 marks)

5

- Depressions
- Crag and tail
- Ice eroded plain
- Roche môntonêe

(iii)   Give <u>three</u> follow-up activities you would undertake after the field st

- Sketching the features.
- Note making/ writing field reports.

Acting / Answering questions/ quiz.
- Discussing the findings.
- ~~Mounting samples~~/ display photographs.

- Analyzing data collected
- Reading more about the topic
- Drawing conclusions

KENYA NATIONAL EXAMINATION COUNCIL
Kenya certificate of secondary education

GEOGRAPHY

Paper 2

MARKING SCHEME
(CONFIDENTIAL)

SECTION A

Answer ALL the questions in this section. (25 marks)

1. (a) Give two uses of diamond.

   - For making jewellery ✓
   - For polishing metals / *Abrasive*
   - For making cutting/instruments. · *milling*

   (Any 2 x 1 = marks)

   (b) Identify three problems facing diamond mining in South Africa.

   - Fluctuation of prices in the world market
   - Low mineral content in the ore
   - High cost of mining/processing/*deep mines*
   - Reducing/depleting reserves
   - Competition of skilled labour with other sectors of the economy.
   - *Striking workers*
   - *collapse of mines*
   - *harsful conditions*

   (Any 3 x 1 = 3 marks)

2. (a) Apart from coniferous forests, name two other types of natural forests.

   Equatorial forests — *Tropical monsoon Forest*
   - Tropical hardwood forests / *Temperate Seaslaus* — *Mangrove forests*
   - Temperature hardwood forests / *Temperate latitous* — *mediterranean forests.*
   - *Mixed Forest.*
   - *Bamboo/montane forests*
   - *warm temperate evergreen / warm temperate forests*

   (2 x 1 = 2 marks)

   (b) State three characteristics of coniferous forests which favour their exploitation.

   - The trees are light in weight. — *Trees are soft.*
   - The trees occur in pure stand
   - There is little undergrowth / *No undergrowth*
   - The trees have straight trunk.
   - *Trees are tall*

   (Any 3 x 1 = 3 marks)

3. Use the map of East Africa below to answer question (a).
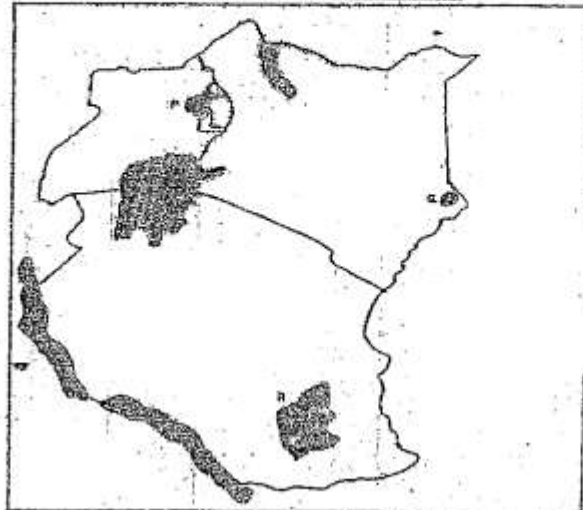
*(a) Name the game reserves marked P, G and R.

P   -   Bokora
Q   -   Boni
R   -   Selous   (3 x 1 = 3 marks)

(b) State two factors which influence the distribution of wildlife in East Africa.

- Vegetation variation/distribution influences the type of wild animals/birds found in an area.
- Drainage of an area influences the distribution/population of different types of species of plants/animals/birds.
- Human activities conserve/destroy wildlife habitats/wildlife influencing the population/distribution.
- The soil of a place determines the plant life which influence wild animals/birds.
- The different types of climate influence the distribution/type of plants/animals/birds.
- fairly level ground forrested same animals / rugged brain discourages the...
- change in altitude leads to variation in vegetation types/   (2 x 1 = 2 marks)
  type field animals for high altitude areas windward slopes are freyed [leanard] slip
  more grass ands

4.   (a) Give two reasons why the geothermal power has not been fully exploited in Kenya.

- The country faces a shortage of capital/inadequate capital required for exploitation.
- There is shortage of skilled personnel as the country relies on expatriates.
- The country faces low level of technology which hinders exploitation of the energy.
- Most of the potential sites are found in remote/inaccessible areas which makes it difficult/expensive.

(2 x 1 = 2 marks)

(b) State three causes of energy crisis in the world

- There is a high demand for oil.
- There are embargoes/controls oil production by the oil producing countries.
- There is de-regulation of oil prices by the suppliers.
- There is unequal natural pattern of crude oil occurrence.
- There is political instability/wars in some of the oil producing countries.

(Any 3 x 1 = 3 marks)

5.   (a) Identify the two types of internal trade.

- Retail trade
- Wholesale trade

(2 x 1 = 2 marks)

(b)   Give three factors that limit trade among the member states of the Common Market for Eastern and Southern Africa (COMESA).

- Poor (infrastructure) ~~transport~~ slows/delays movement of goods/services.
- Difference in tariffs/custom duties hinders trading activities.
- Difference in currency makes transactions difficult.
- Production of similar/duplication of goods limits trade.
- Different levels of industrial development creates imbalance in trade.
- Movement barriers limit free movement of people/goods/services.
- Different political ideologies.
- Political instability/insecurity/civil wars.

(Any 3 x 1 = 3 marks)

SECTION B

Answer question 6 and other TWO questions from this section.

6.   Study the photograph below and use it to answer question (a).

(a)   (i)   Identify the type of photograph shown above.

Ground general view/ Ground oblique

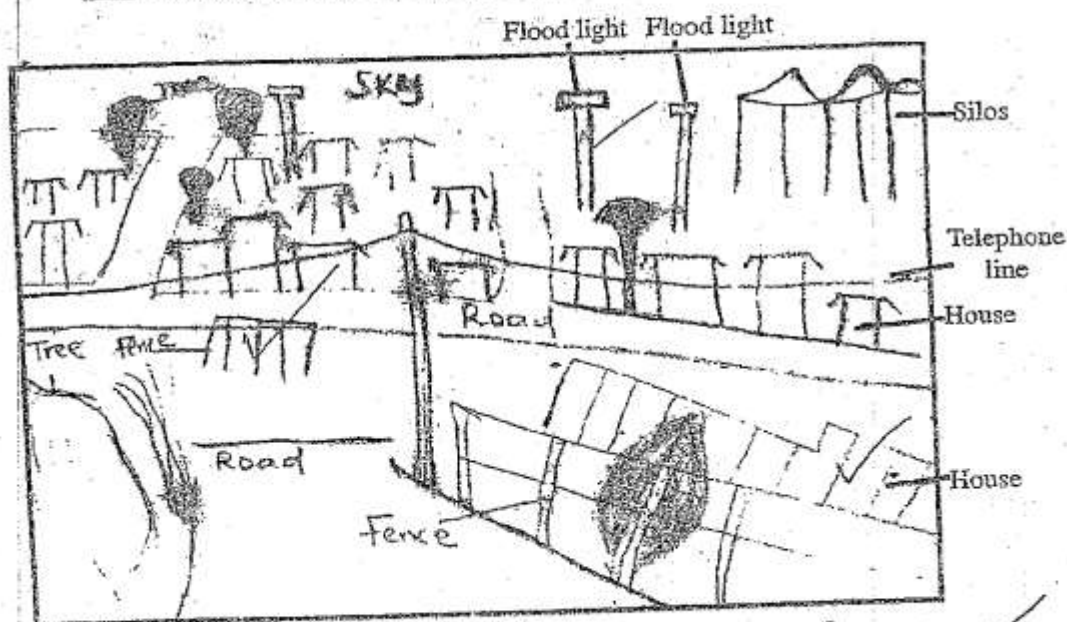(ii)   Name the type of settlement shown on the photograph.

Informal settlement/ urban | slum.

(iii)   What time of the day was the photograph taken.

Afternoon / mid-morning   (1 mark)

(iv)   Draw a rectangle measuring 15 cm by 10 cm. On it, sketch and label five human features shown on the photograph.

Rectangle ✓
Any Five features ✓

- Drawing a rectangle correctly   *Telephone Posts* (1 mark)
- Roads   *Wall*
- Houses   *Car*
- Silos/*Tanks*   *Quarry*
- Flood lights/*electricity poles/line*   *Cloth lines*
- Telephone line
- Fences
- Planted trees.

(Any 5 x 1 = 5 marks)

Total = 6 marks

(b)   Explain four economic factors that influence settlement.

Fishing/water points/Athletics.
- Mining attracts workers who settle near the mine fields.
- Trade leads to development of market centres thereby attracting many people.
- Industrialisation leads to creation of jobs hence encouraging many people to live near industries.
- Transportation results to accessibility of services/*goods* thus attracting more settlement.
- Agriculture/leads to siting of collection centres hence development of urban centres/ *New settlements.*
- Administration provides security thereby encouraging settlement.
  To sustain nomads pastoralism temporarily settlements are put-up. (Any 4 x 2 = 8 marks)

(c)   Describe four negative effects of urbanisation.

/*expansive*
- Inadequate housing leads to development of slums/shanties in urban centres.

- There is traffic congestion in urban centres (due to poorly planned roads/traffic control systems) *resulting in delays.*
- Unemployment in urban centres leads to high crime rate/ *Prostitution.*
- There is pollution in urban centres due in dumping of garbage/disposal of waste into drainage systems/noise from vehicles and industries/emission of smoke from vehicles and industries.
- There is strain on social amenities in urban centres due to rapid population growth.
- There are street families in the urban centres due to poverty.
- *Cultural erosion due to Cosmopolitant population.* (Any 4 x 2 = 8 marks)

7.   (a)   Explain three social factors that influence agriculture.

- Gender influences productivity as the produce will depend on effort of the gender involved.
- Some religious beliefs determine the type of livestock farming since they discourage rearing of certain animals.
- The culture of a people determines the type of crops grown/livestock kept in order to meet their dietary needs.
- Land tenure system allows/limits individuals/communities to use the available land thus increasing/decreasing produce.
- The interaction between people leads to adoption of new techniques in farming. /*New food crops.*
(Any 3 x 2 = 6 marks)

(b) (i) Describe the cultivation of oil palm from land preparation to harvesting.

- The nursery is prepared where the oil palm seeds are planted.
- The land is cleared of vegetation/ploughed ✓
- The holes are dug with spacing of 9m x 9m.
- The seedling are transplanted from the nursery into the holes.
- Weeding/spraying is done regularly to protect the plants against pests/disease. manuring/fertilizer application ✓
- The maturing trees flower/bear fruits after three years.
- The mature/ripe fruits are harvested using a curved knife/chisel/hook

(7 x 1 = 7 marks)

(ii) Give three uses of palm oil.

- As a cleansing agent in the tin industry.
- Making wine
- Making margarine/cooking fat
- Making soap
- used in pharmaceuticals
- used as food

- making candles
- making cosmetics
- used in confectionary industry
- used as lubricant.

(Any 3 x 1 = 3 marks)

(c) Explain three reasons why horticultural farming is encouraged in Kenya.

- To earn foreign exchange which help to improve the economy.
- To create employment which enables people earn income hence improve their living standards.
- To provide raw materials which support the development of related industries.
- To enable farmers with small pieces of land earn high income.
- To improve food supply in the country thereby ensuring food security.
- To diversify agricultural production and reduce (Any 3 x 2 = 6 marks) over reliance on few cash crops/increase earnings.

Reason- R
Explanation- E

(d) Give three factors which favours beef farming in the Nyika plateau.

- Presence of watering points/rivers/swamps, land ✓
- There are large tracks of flat land, with natural grass. ✓
- The local people who keep livestock as their occupation.
- The climatic conditions of the area favour beef cattle keeping
- There are ranching schemes which control grazing/spreading of diseases/pests.

(Any 3 x 1 = 3 marks)

(a) Explain four ways in which land is being rehabilitated in Kenya.

- By filling open pits/land scaping in order to be used for farming/settlement.
- By constructing terraces thereby reducing the speed of surface runoff/soil erosion
- By planting trees on degraded land thereby protecting it against the agents of erosion.
- By building gabions in order to hold/trap the soil carried by water.
- By constructing dykes along river banks/dams across rivers in order to control floods.
- By applying manure/fertilizer on derelict land in order to restore its fertility.
- By irrigating semi-arid areas/during dry seasons in order to provide water required from crop growth.
- By fallowing to allow land to regain fertility (Any 4 x 2 = 8 marks)
- mulching/cover crops/cut-off drains to retain moisture
- Drainage channels to remove excess water from the land
- Controlled grazing to allow regeneration of pasture/control erosion.

(b) (i) State two ways in which the salinity of the polders is reduced in the Netherlands.
  - Chemicals are applied to lower salts in the soils.
  - Fresh water is flashed to the soils to remove/dilute the excess salts.
  - Reeds are planted to use up the excess salts.
  - Continuous pumping of water from polders.   (Any 2 x 1 = 2 marks)

(ii) Explain four ways in which the Zuyder Zee project benefits the Netherlands.

  - Reclamation has increased the size of the land which is used for farming/settlement.
  - The reclaimed land has increased agricultural output hence more food/raw materials for industries/for export
  - Damming created a freshwater lake thus improving the supply of water for domestic/industrial use/ Lowering salinity of the sea/ irrigation
  - It has led to employment of many people thus improving their standards of living.
  - It has led to employment of many people thus improving their standards of living. canals
  - Roads have been constructed thus improving transportation.
  - Reclamation has created sceneries that have become tourists attractions thereby earning foreign exchange.
  - The construction of the Great Dyke enabled the country to defence.
  - Also controlled diseases of floods.   (Any 4 x 2 = 8 marks)

(c) You intend to carry out a field study on irrigation farming in Mwea Tebere Irrigation scheme.

(i) Identify the two types of hypothesis you would develop for the study.

  - Alternative/substantive/Positive
  - Null/Negative
  - Question form.
                                          (2 x 1 = 2 marks)

(ii) Name three crops grown in the scheme you are likely to identify.

  - Rice   — water melons
  - Maize/Baby Corn   — Onions.
  - Tomatoes   — Green grams
  - Beans/peas French Beans   — chellies.
  - Vegetables   — Bananas
  - Peas   (3 x 1 = 3 marks)

(iii) Give reasons why you would sample the area of study.   (2 marks)

  - It is a cheaper to study portions of the scheme.
  - It saves the amount of time spent on the study.
  - I brings out the details of the area under study.
  - It enables one to make generalised conclusion about the area under study.
                                          (2 x 1 = 2 marks)

(a) Define the term fishing.

It is the extraction/exploitation of aquatic animals/fish.
                                          (2 marks)

Explain two ways in which each of the following factors negatively affect fishing in Kenya.

(i)   Agricultural activities

-    Poor farming methods cause soil erosion thereby leading to siltation of the lakes/rivers which hinders the movement of fishing vessels/Death of some fish
-    Agro-chemicals used on farms were washed into the lakes/rivers thus polluting the water/kill fish/Eutrophication
-    Abstraction of water from the river/lakes for irrigation reduces the level of the water thereby limiting the types of fish species.

(Any 2 x 2 = 4 marks)

(ii)   Water weeds

-    The growth of the weeds on the surface of the water harbours dangerous animal/predators thereby scaring away the fishermen.
-    The weeds growing on the water form a thick barrier/insulate the water thereby hindering the amount of sunlight required for the growth of Planktons.
-    The weeds on the water choke the fishing vessels thus hindering their movement/Carry away nets.
-    weeds competes for oxygen with fish (Any 2 x 2 = 4 marks) which leads to death of fish.

Use the map of North-West Atlantic fishing ground to answer question (c) (ii) and (iii).
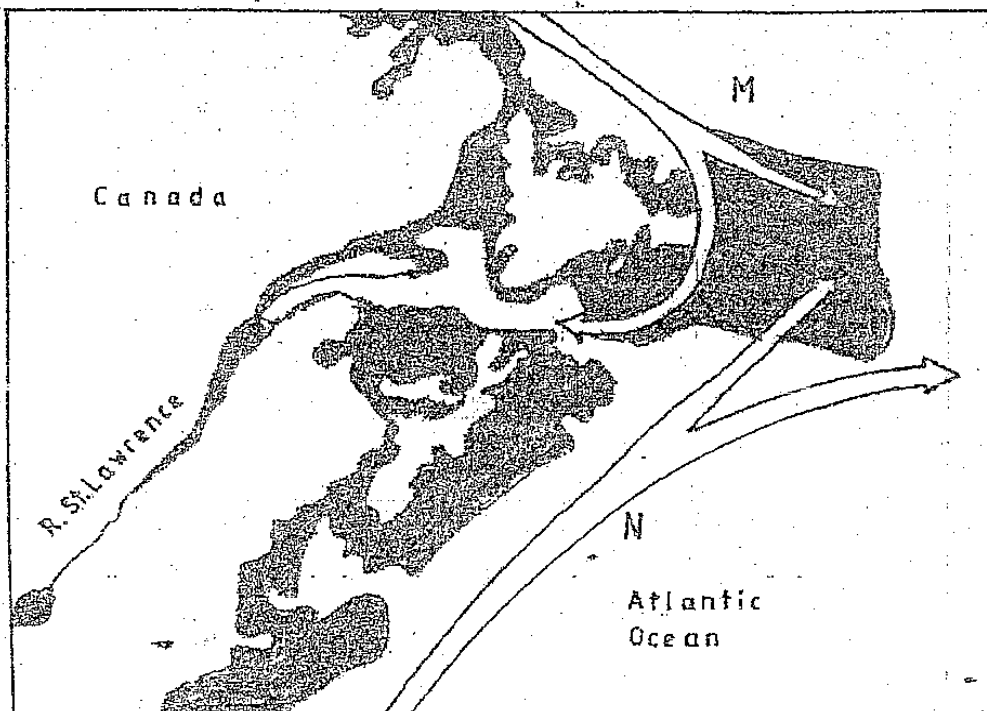
(i) Give three types of fish species caught in the North-West Atlantic fishing ground. (3 marks)

- Herring
- Cod
- Mackerel
- Haddock
- Menhaden
- Lobsters
- Halibut
- Hake
- Flounder
- Sardines
- Sole

— Whiting
— Shell fish
— Tuna.

_ny 3 x 1 = 3 marks)

(ii) Name the ocean currents marked.

M - Cold Labrador current (1 mark)
N - Warm Gulf Stream Drift current (1 mark)

(ii) Explain two ways in which the convergence of ocean currents marked M and N influence fishing. (4 marks)

minerals

- It causes upwelling of water which increases supply of oxygen/Planktons required for growth of fish hence presence of alot of fish/many species of fish.
- The warm current raises the temperature of the ocean water making it ice-free thereby encouraging fishing throughout the year.
- The cold current carries minerals which encourage growth of Planktons. thus food for fish thus alot of fish.
- It causes cool conditions/temperatures thereby favouring the growth of Planktons required by fish hence presence of alot of fish/many fish species.

(Any 2 x 2 = 4 marks)

(d) Give three differences between fishing in Kenya and Japan.

Mechanization

- In Kenya there is low level of technology/while in Japan there is advance/efficient technology/Mechanization.
- In Kenya fishing is done on small scale while in Japan fishing is down on large scale.
- In Kenya there is a small domestic/external market while in Japan there is large domestic/external market.
- In Kenya few people market their fish through co-operatives while in Japan marketing is mainly done through co-operatives.
- In Kenya fishing is mainly done near the continental shelf/shallow sea waters/Lakes while in Japan fishing it is mainly deep sea fishing.
- In Kenya fishermen face stiff competition from foreigners while in Japan there is little competition from foreigners.
- In Kenya there are afew varieties of marine fish species. (Any 3 x 2 = 6 marks)
- In Kenya fish eating culture is limited while in Japan it is widespread.
- In Japan there are many variety of fish species.
- In Kenya there is limited research while in Japan there is research about.

Turn over