

5.2 GEOGRAPHY (312)

5.2.1 Geography Paper 1 (312/1)

1. (a) **What is the relationship between Geography and Mathematics?**

- Mathematics principles/formulae are used in Geography to calculate distance/area/ population density.
- Geography information can be analysed/presented accurately through the application of mathematical techniques.
- Geographical concepts are applied in calculating direction/bearing in mathematics.

any 2 x 1 = 2 marks

(b) **State four reasons why it is important to study Geography.**

- It helps to develop mental skills.
- It enables learners to understand/appreciate different environmental influences.
- It encourages international awareness/co-operation.
- It helps learners to appreciate important social values, such as time management/ responsibility.
- It promotes positive attitudes towards protection/conservation of resources.
- It leads to development of career opportunities.
- It helps learners to manage time properly.
- It enables learners to explain the origin/formation of the earth/landforms.

any 4 x 1 = 4 marks

2. (a) **Name the two layers of discontinuity that make up the interior structure of the earth.**

- Mohorovicic/moho.
- Gutenberg.

2 x 1 = 2 marks

(b) **State three characteristics of the outer core in the interior structure of the earth.**

- outer core is composed of molten rock material.
- it is made up of iron and nickel.
- it is estimated to be about 2100km to 2890km thick.
- it has temperatures ranging from 3700°C to 5000°C.
- it has an average density of 10.0gm/cc to 12.3gm/cc.

any 3 x 1 = 3 marks

3. (a) **Name two forms of precipitation that commonly occur in Kenya.**

- rain.
- hail.
- dew.
- fog/mist.

any 2 x 1 = 2 marks

(b) **What is a Stevenson's screen?**

It is a white wooden box in which meteorological instruments are kept at a weather station.

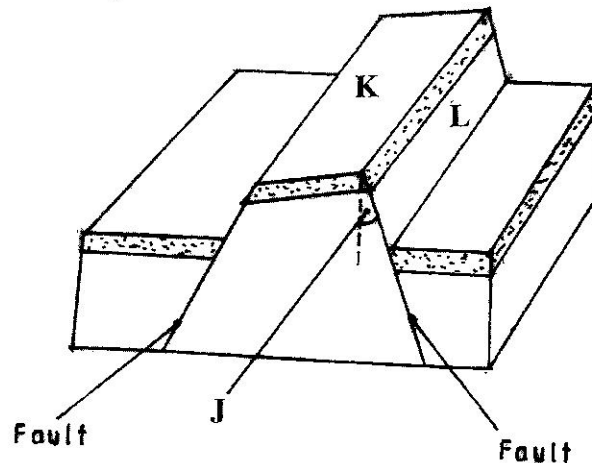
(2 marks)

4. (a) Identify two causes of earth movement.

- magma movement within the crust
- gravitational pull/quantitative pressure
- convectional currents in the mantle.
- isostatic adjustment.

any 2 x 1 = 2 marks

The diagram below shows some features formed as a result of faulting.
Use it to answer question b.



(b) Identify the;

(i) angle marked J.

- Hade.

(1 mark)

(ii) the feature marked.

- K - tilt block.
- L - fault scarp/escarpment

(1 mark)

(1 mark)

5. (a) Identify two sources of water found in a lake.

- rainwater;
- rivers;
- underground water;
- glacial melt waters.

any 2 x 1 = 2 marks

(b) Give three characteristics of lakes formed due to faulting.

- most are narrow;
- most are steep-sided;
- most are deep/some are shallow
- most of them are salty/some are fresh
- most of them are long.

any 3 x 1 = 3 marks

6. Study the map of Kitale 1:50,000 (sheet 75/3) provided and answer the following questions.

- (a) (i) Identify two human made features found at the grid square 2320.
- bridge/mc call's bridge.
- All weather loose surface road. 2 x 1 = 2 marks
- (ii) What is the altitude of the highest point in the area covered by the map?
2362 metres. (2 marks)
- (iii) Give three types of natural vegetation found in the area covered by the map.
- forest
- scrub
- woodland
- scaltered trees
- riverine trees
- papyrus vegetation
- thicket
any 3 x 1 = 3 marks
- (b) (i) What is the bearing of the Air Photo Principal Point at gridsquare 3426 from the air photo principal point at gridsquare 2931?
132± 1. (2 marks)
- (ii) Measure the distance of the dry weather road (C640) from the junction at point M (345142) to the junction at point N (416201). Give your answer in kilometres.
12.1km ± 0.1. (2 marks)
- (c) (i) Using a scale of 1cm to represent 40 metres, draw a cross-section from grid reference 410180 to grid reference 500180.
- (ii) On the cross-section mark and name the following:
- A dry weather road.
- River Kaptarit.
- A ridge. (3 x 1 = 3 marks)
- (iii) Calculate the vertical exaggeration (VE) of the section.

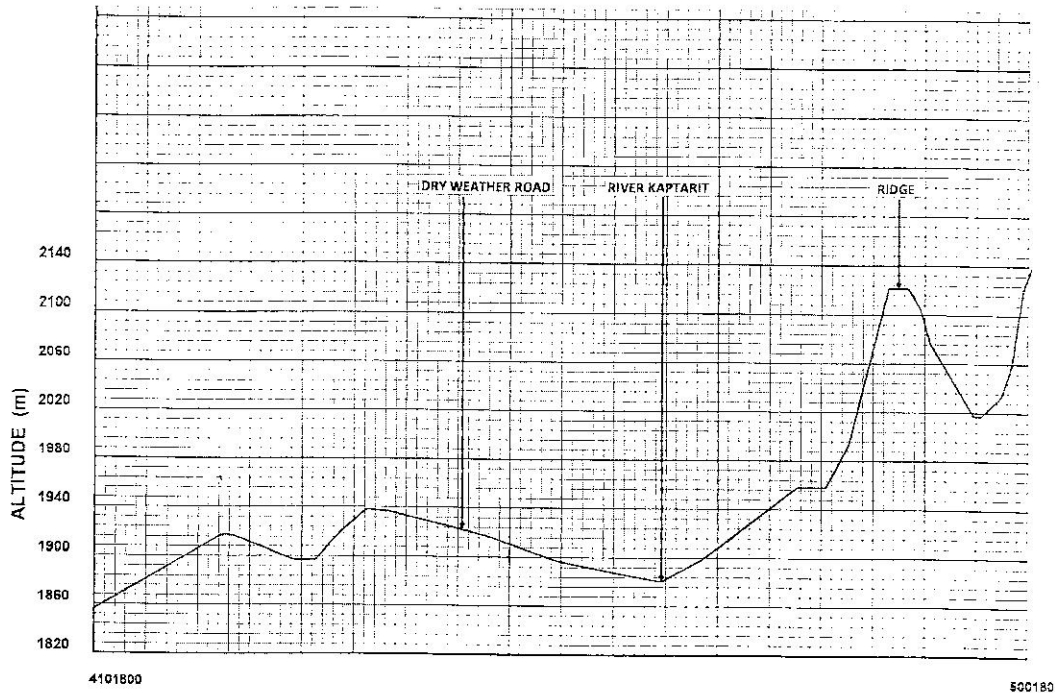
$$VE = \frac{VS}{HS}$$

$$VE = \frac{1}{4000} \div \frac{1}{50,000}$$
$$= \frac{1}{4000} \times \frac{50,000}{1}$$

$$= 12\frac{1}{2} / 12.5$$

(2 marks)

(c)



A CROSS-SECTION FROM GRID REFERENCE 410180 TO GRID REFERENCE 500180

(d) Citing evidence from the map, identify five social services offered in Kitale Municipality.

Service	Evidence
Health/medical	Presence of hospital
Recreational services	Sports club/Kitale Club/Golf Course
Religious services	Church
Security services	Police station/D.C's Office
Housing	Built-up areas/huts
Water supply	Water tower/tank
Burial services	Cemetery

5 x 1 (5 marks)

7. (a) (i) What is a mineral?

Mineral is an inorganic substance with a definite chemical composition at/beneath the surface of the earth/a social inorganic substance occurring naturally. (2 marks)

(ii) Describe the following characteristics of minerals.

- **Lustre** - minerals differ in their brightness depending on the nature of their reflective surfaces. Smooth surfaces are shiny whereas rough surfaces are dull. (2 marks)

- **Colour** - different minerals display different colours. Minerals that have iron/magnesium have dark colours. (2 marks)
- **Density** - minerals have different weight per unit volume of water/ minerals have different specific gravity/some minerals are heavier while others are light. (2 marks)

(b) (i) **Name two examples of extrusive igneous rocks.**

- | | | |
|----------|------------|-------------|
| - Basalt | - Rhyolite | - Phonolite |
| - Pumice | - obsidian | - Trachyte |
| - Tuff | - Andesite | - Scoria |
| - Tefra | | |

any 2 x 1 = 2 marks

(ii) **Describe three ways in which sedimentary rocks are formed.**

Mechanically formed sedimentary rocks - rock fragments are transported by wind/water/ice. They are deposited in layers. Over a long period of time, they are compacted into a hard rock.

Organically formed sedimentary rocks - remains of plants/animals are deposited in layers. Over a long period of time, the remains are compacted forming a hard rock.

Chemically formed sedimentary rocks - dissolved minerals are transported into water bodies. They are then precipitated/evaporated over a long period of time, the precipitates/evaporites are then compacted to form a hard rock.

3 x 1 = 3 marks

(c) **Explain the significance of rocks to the economy of Kenya under the following:**

- (i) **Tourism:** Some rocks form unique features that attract tourists earning the country foreign exchange/income. (2 marks)
- (ii) **Energy:** Some sedimentary rocks contains fossil fuels which are sources of energy for domestic/industrial use. (2 marks)
- (iii) **Water:** Some rocks act as storage for water which can be supplied for domestic / industrial / agricultural use. (2 marks)

8. (a) **Explain the following processes of weathering:**

- (i) **Hydration:** In hydration certain rock minerals absorb water and expand. This causes internal stress in the rock and it eventually disintegrates. (2 marks)
- (ii) **Oxidation:** Oxidation takes place in rocks that contain iron. The iron combines with oxygen forming iron oxides/Ferric oxide. Such rocks change colour and crumble easily. (2 marks)
- (iii) **Frost action**
 - In temperate/high mountain areas, water may occupy services/cracks in the rocks during the day.
 - At night the temperatures drop below freezing point causing the water to freeze/expand, exerting pressure in the cracks.

- During the day, temperatures rise, causing the ice to melt thus releasing pressure in the cracks.
- This alternate freeze-thaw action weakens the rock causing it to disintegrate.

(3 marks)

(b) Describe how an exfoliation dome is formed.

- In arid/semi arid areas, there is large diurnal ranges of temperature.
- During the day, a homogenous rock is intensely heated/at night, the rock loses 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 outer layer peels off.
- The peeling off leaves behind a rounded mass of rock known as exfoliation dome.

any 6 x 1 = 6 marks

(c) Explain three physical factors that enhance movement of materials along a slope due to gravity.

Nature of materials.

- 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.

Angle of slope.

- The steeper the slope, the faster the rate of movement/where rocks are dipping steeply, movement is faster.

Climatic factors/amount of water.

- 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.

Vegetation cover

- Bare surfaces are more likely to experience mass wasting because there is no vegetation to bind the materials together.

Earth movements.

- Earthquakes/volcanic eruptions/isostatic adjustments cause vibrations which may trigger widespread movement of weathered rock materials.

any 3 x 2 = 6 marks

(d) (i) Give two processes of rapid mass movement.

- landslides/slumping/rockslide/rockfall/debris slide/debris fall/avalanche
- mudslides/mudflow
- Earthflows/earthslide

any 2 x 1 = 2 marks

(ii) State four indicators of occurrence of soil creep in an area.

- Telephone/fence poles that are inclined down a slope/bent tree trunks.
- Accumulated soil at the foot of a slope/behind obstacles such as walls.

- Existence of bare rock/exposed upper slope.
- Presence of a 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 slope retreat.

any 4 x 1 = 4 marks

9. (a) (i) **Outline two factors that influence the development of drainage patterns.**

- Direction of the slope of the land.
- Difference in rock resistance /hardness.
- The arrangement of rock layers/rock structure.
- Faulting/fault guided.

any 2 x 1 = 2 marks

(ii) **Outline five characteristics of a river in its youthful stage.**

- the river has a steep river gradient.
- the river channel is narrow.
- the river has deep/steep-sided/V-shaped valley/gorges
- the river flows at a high speed/high stream velocity.
- the vertical erosion/down cutting is dominant.
- the river channel is generally winding.
- Rapids/waterfalls/cataracts/cascades/interlocking spurs/potholes/plunge pools
- the type of flow is torrential.
- the river has a small volume of water.
- the river has a small load.

any 5 x 1 = 5 marks

(b) **Describe the following processes of river erosion.**

- (i) **Attrition :** As rock materials are transported downstream, they constantly collide against each other.
The materials gradually wear down/reduce in size.

(2 marks)

- (ii) **Corrasion :** As solid rock materials are transported downstream, they are hurled against the banks and dragged along the river bed.
The rock materials scour/erode/chip off pieces of rock from the channel and the river bed.
The rock materials scour/smoothen/grind the river bank/bed.
Eddy currents rotate pieces of rock around the hollows breaking/grinding the river bed.

(4 marks)

(c) **Explain three negative effects of rivers to the human environment.**

- When rivers flood, they destroy a lot of property/crops/may lead to loss of human life/displace people.
- Wide/deep rivers are a 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 contaminates sources of water

- Some rivers are habitat to dangerous animals which may attack human beings/destroy crops.

any 3 x 2 = 6 marks

(d) **Your class is planning to carry out a field study of a river in its old stage.**

(i) **State three reasons why it would be necessary to pre-visit the area of study.**

- it helps to assess the suitability of the area of study.
- It helps to draw up objectives/hypothesis for the study.
- It helps to prepare a route map.
- it helps to design a working schedule.
- it helps to identify the probable problems/how to solve problems.
- it helps to estimate the cost of the study.
- it helps to identify suitable methods of collecting data.
- it helps to identify appropriate equipment to be used during the study.

any 3 x 1 = 3 marks

(ii) **State three activities you would carry out to determine why deposition occurs at this stage.**

- Measuring of gradient.
- Finding out the nature of the load.
- Finding out the amount of the load.
- Establishing the velocity of the river.
- Observing obstacles in the stream channel/distributaries.
- Measuring of the width/depth of the river.

any 3 x 1 = 3 marks

10. (a) (i) **Define the term soil.**

It is a naturally occurring thin layer of loose/unconsolidated materials which overlies the crustal rocks and on which plants grow. /It is an accumulation of rock particles/minerals, organic matter, water and air found on the surface of the earth.

(2 marks)

(ii) **Give two factors that determine soil leaching.**

- nature of soil/solubility of minerals.
- amount of rainfall./Alternating wet and dry seasons.
- nature of the slope.

any 2 x 1 = 2 marks

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

(i) **Parent rock**

The nature of rock influence the rate of weathering in that soft rock weather fast while hard rock are resistant and weather slowly.

The parent rock determines the soil texture in that large/coarse grained rocks produce large/coarse grained soils.

The type of minerals in the parent rock are transferred to the soil during formation.

any 2 x 2 = 4 marks

- (ii) **Biotic factors.**
- Micro organisms in the soil assist in plant/animal decay to form humus.
 - The micro organisms mix and aerate the soils.
 - The roots of plants penetrate the soil enabling it to become porous.
 - ploughing/digging break up soil structure into small particles.
 - when plants and animals die, they decay to form humus/organic matter in the soil.
- Any 2 x 2 = 4 marks
- (c) (i) **State three characteristics of desert soils.**
- The soils contain little or no humus.
 - the soil are of sandy/stony texture.
 - the soils are saline/contains alot of salts/high lime content.
 - the soils lack moisture.
 - the soils may be light coloured.
 - the soils are thin/shallow
 - the soils are lightly porous.
- any 3 x 1 = 3 marks
- (ii) **Give two economic uses of soil.**
- It is used as raw material in building/construction/industry/pottery/ glass making/brick making.
 - Soils support agriculture/development of forestry
 - Some soils contain valuable minerals.
 - some soils have medicinal value.
 - it is used in building/construction industry.
- any 2 x 1 = 2 marks
- (d) **You are supposed to carry out a field study of an eroded area.**
- (i) **What information would you collect through observation that would indicate that the area is severely eroded?**
- rills/gullies/deep trenches.
 - uneven surface.
 - lack of or little vegetation.
 - little/absence of topsoil/thin soil.
 - exposed plant roots.
- any 2 x 1 = 2 marks
- (ii) **Identify three methods you would use to record the observations.**
- photograph taking/video recording.
 - video recording.
 - note taking.
 - field sketching.
 - tabulation.
- any 3 x 1 = 3 marks
- (iii) **State three recommendations you would give to control soil erosion.**
- construction of gabions.
 - construction of check dams.
 - afforestation/reafforestation.
 - filling in the gullies.
 - construction of drainage trenches.
 - practising appropriate methods of farming/planting cover crops.
- any 3 x 1 = 3 marks

5.2.2 Geography Paper 2 (312/2)

1. (a) **What is mining?**
It is the extraction of minerals occurring on or below the earth's surface. (2 marks)

(b) **State four benefits of Soda Ash mining to the economy of Kenya.**

- Kenya earns foreign exchange from the exports.
- It provides employment opportunities.
- It has led to development of related industries.
- It has led to the development of Magadi Town.
- It has led to the development of social amenities.
- It has led to the development of transport and communication network.
- Kenya earns revenue through taxation.

Any 4 x 1 = (4 marks)

2. (a) **Name two methods used in deep sea fishing**

- Trawling
- Drifting
- Seining
- Line fishing

Any 2 x 1 = (2 marks)

(b) **State three ways in which the Kenya Government is promoting the fishing industry**

- Encouraging fish farming
- Restocking overfished areas
- banning indiscriminate fishing/enforcing the use of standardised nets/seasonal ban of fishing to allow breeding.
- Establishing research stations
- controlling water hyacinth
- dredging of silted lakes
- looking for external markets for fish
- Establishment of ministry of fisheries.

Any 3 x 1 = (3 marks)

3. (a) **Apart from the sun, name three other sources of electricity**

- Water
- Oil
- Steam
- Coal
- Wind
- Uranium
- Tides/waves

Any 3 x 1 = (3 marks)

(b) **Give three advantages of using solar energy**

- It is a cheap source of energy
- It is an inexhaustible source of energy
- It is a clean/environmentally friendly form of energy
- It can be stored for future use
- It is easy to use

Any 3 x 1 = (3 marks)

4. **State three reasons why it is necessary for the Government of Kenya to carry out a national census**

- To determine the total population
- To determine the trends of the population
- To plan for basic facilities/To help in distribution of resources
- To make decisions on new administrative areas
- To determine the literacy level
- To project the population growth

(3 marks)

5. (a) **Identify two methods used to control tsetseflies in Kenya**

- Trapping
- Use of chemicals
- Clearing bushes
- Sterilising males
- Creating Buffer zones.

Any 2 x 1 = (2 marks)

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

- Garbage heaps are unattractive/ugly/eyesore
- Garbage produces foul smell
- Garbage washed into water surfaces causes pollution/cause soil pollution
- Organisms that thrives in garbage may transmit diseases
- Some wastes may cause injury
- Block drainage system
- Cause obstruction on roads/pavements.

Any 3 x 1 (3 marks)

SECTION B

Study the photograph below and answer question (a)

See the question paper

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

Ground general view photograph.

(1 mark)

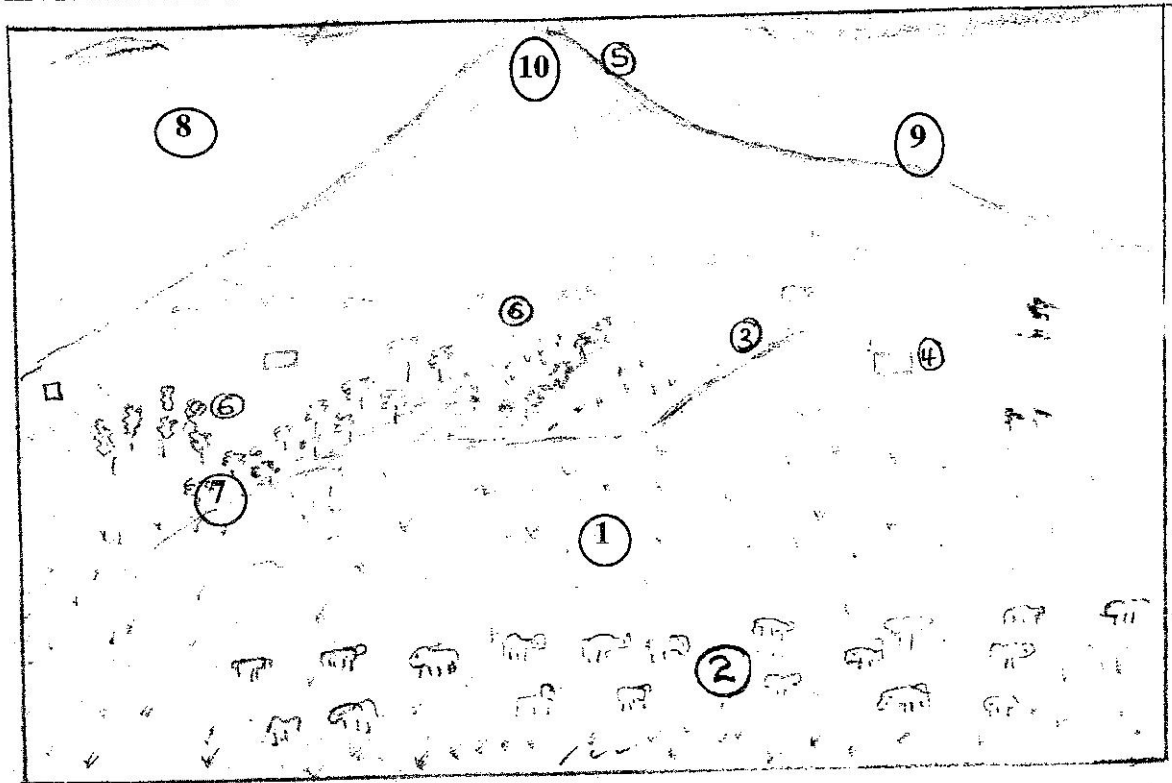
(ii) **Draw a rectangle measuring 15 cm by 10 cm to represent the area covered by the photograph.**

(1 mark)

(iii) **On the rectangle, sketch and label four main features shown on the photograph.**

(4 marks)

MAIN FEATURES SHOWN ON THE PHOTOGRAPH



Key

- | | | | |
|----|------------------|-----|----------|
| 1. | Grassland/ plain | 8. | Sky |
| 2. | Cattle | 9. | Conelets |
| 3. | Footpath/ road | 10. | Snow/ice |
| 4. | Homestead | | |
| 5. | Mountain/hill | | |
| 6. | Forest | | |
| 7. | Hedge | | |

(iv) Using evidence from the photograph, identify two indicators that show the area receives high rainfall.

- Presence of a forest/Trees
- mountain at the background
- Continuous grass cover/Green vegetation
- Dairy cattle/cows

Any 2 x 1 = (2 marks)

(b) (i) Name three exotic types of dairy cattle reared in Kenya

- Friesian/Holstein
- Jersey
- Ayrshire
- Guernsey
- Alderney
- Sahirwal
- Flikvieh/Simmendal
- Swiss brown/Brown Swiss

Any 3 x 1 = (3 marks)

(ii) **Explain three human factors that favour dairy farming in the Kenya Highlands.**

- High population in the area offers ready market for milk and other dairy products.
- There are milk processing factories which help in milk processing and storage
- Many parts of Kenya highland is well served by road network which supports fast transport of milk to processing plants
- Co-operative societies have been set up to market the dairy products
- Provision of veterinary services that have helped to promote rearing of high quality breeds.

Any 3 x 2 = (6 marks)

(c) **Explain four ways in which dairy farming in Kenya is different from dairy farming in Denmark.**

- In Kenya, cattle mainly depend on naturally growing grass whereas in Denmark, the cattle is fed on fodder and commercial grass.
- In Kenya, mechanization is limited whereas in Denmark mechanization is widely used.
- In Kenya, most farmers practice mixed farming while in Denmark dairy farming is highly specialized.
- In Kenya, most of the dairy products are consumed by the domestic market whereas in Denmark the products are mainly exported.
- In Kenya dairy production is affected by variation in climate whereas in Denmark, dairy farming is least affected by variations in climate.
- In Kenya, dairy cooperative movement is in its infancy whereas in Denmark cooperative movement is highly developed.
- In Kenya, artificial insemination/extension services is limited to a few farms whereas in Denmark artificial insemination/extension services are widely used.
- In Kenya, animals graze outdoor throughout the year, whereas in Denmark, animals are kept indoor in winter.
- In Kenya, dairy farming is mainly in the Highlands whereas in Denmark, it is throughout the country.
- In Kenya, research on dairy farming is limited whereas in Denmark, it is extensive.

Any 4 x 2 = (8 marks)

7. (a) (i) **What is agroforestry?**

It is the deliberate growing of trees and crops/keeping of animals on a piece of land. (2 marks)

(ii) **Give four reasons why agroforestry is encouraged in Kenya.**

- To ensure continuous supply of wood fuel./To conserve forests
- Provides raw materials for industries.
- To conserve soil.
- To provide fruits /food for human consumption.
- Trees are a source of income to farmers.
- To provide fodder for animals.
- Trees act as wind breakers/provide shade to young plants.

4 x 1 = (4 marks)

(b) Use the map of Kenya below to answer questions b(i) and (ii).

See the question paper

(i) Name the forest reserves marked H, J and K.

H - Mt. Elgon

J - Mt. Kenya

K - Arabuko Sokoke

3 x 1 (3 marks)

(ii) Explain four factors that favour the growth of natural forest in the area marked L.

- The area receives high rainfall/1000 - 1500 mm per year which encourages the growth of trees.
- The area has deep well drained fertile volcanic soils that allow the roots to penetrate deep into the ground. /uptake/provision of nutrients.
- The area has moderate to cool temperatures that allow for the growth of a variety of trees.
- The area is a gazetted forest hence settlement/cultiyation is prohibited.
- Some areas are steep which discourages settlement and allow for forest growth.
- Enforcement of laws to allow re-establishment of forests.

Any 4 x 2 = (8 marks)

(c) Explain four problems facing forestry in Kenya.

- Rapid increase in population has led to encroachment into forest land hence destruction of forests.
- Occurrence of forest fires which have led to the destruction of large areas under forest.
- Illegal logging has led to indiscriminate cutting of trees thereby reducing/depleting indigenous tree species.
- Attacks by pest/diseases has led to destruction of valuable tree species.
- Trees are damaged by some wild animals through debarking/trampling/uprooting.
- At times, the government allocates land to private developers thus reducing the land under forest.
- Prolonged droughts lead to drying of some trees.

Any 4 x 2 = (8 marks)

8. (a) (i) Name two provinces in Canada where wheat is grown on large scale.

- Alberta

- Manitoba

- Saskatchewan

Any 2 x 1 = (2 marks)

(ii) State three physical conditions that favour wheat farming in Canada.

- Availability of extensive undulating land.

- Well drained fertile soils.

- Warm temperatures averaging 15° C. /warm climate.
- Rainfall of about 560 mm./moderate rainfall.
- Sunny summers.

Any 3 x 1 = (3 marks)

(b) **Compare wheat farming in Kenya and Canada under the following subheadings.**

(i) **Research**

In Kenya, Little research is being undertaken on wheat farming while in Canada there is advance research on wheat farming which produces high yielding seeds/ control of pests and diseases. (2 marks)

(ii) **Government policy**

In Kenya, there is no government policy on subsidies/incentives to wheat farmers while in Canada the government subsidizes the farmers in case of crop failure. (2 marks)

(iii) **Transport**

In Kenya, there is poor road network in wheat growing areas while in Canada there is elaborate railway network in wheat growing areas. (2 marks)

(c) **Explain four problems that affect wheat farming in Canada.**

- Fluctuation in world prices of wheat has led to farmers being uncertain about their earnings hence turning to growing of crop with better earnings.
 - The soils have become exhausted due to long use leading to lower yields/lower quality yields.
 - Occurrence of summer heat waves/frost have destroyed wheat crops leading to lower yields.
 - Due to pests/diseases, the farmers have to spray the crop with chemicals hence increasing the cost of production.
- Canada faces competition from other wheat producing countries which has reduced the market for her produce.

Any 4 x 2 = (8 marks)

(d) **Your Geography class intends to carry out field study on wheat harvesting in a farm.**

(i) **State two reasons for preparing a working schedule.**

- It ensures all the intended activities are captured.
- It helps in time management.
- It helps to monitor the field work exercise while it is still in progress.
- It enables the research group to remain within the scope of the study.

Any 2 x 1 = (2 marks)

(ii) **Outline two problems that face wheat harvesting you are likely to find out.**

- Shortage of harvesting machinery/combine harvester.
- Unfavourable weather conditions.
- High cost of labour.
- Spillage of wheat grains during harvesting.

Any 2 x 1 = (2 marks)

(iii) **Suppose during the field study you used interview method to collect data.**

State two limitations of the method.

- The respondents may give inaccurate information.
- It is time consuming.
- Some respondents may be unwilling to be interviewed.
- Language barrier may arise.

Any 2 x 1 = (2 marks)

9. (a) (i) **Identify the three types of inland waterways used for transport in Africa.**

- Rivers
- Lakes
- Canals.

(3 marks)

(ii) **Give four reasons why the government of Kenya is expanding pipeline transport.**

- To reduce the congestion on/ damage of roads by tankers.
- To reduce road accidents by tankers.
- To reduce congestion of oil terminus.
- Pipeline transport is cheaper compared to road transport.
- Pipeline transport is more reliable/ convenient than road.
- To reduce damage/ loss of the oil products while being transported.
- It is faster means of transport.

Any 4 x 1 = (4 marks)

(b) (i) **State three advantages of railway transport.**

- It is used to carry heavy/ bulky goods/ large carrying capacity.
- It is more reliable/ efficient due to fixed time schedules/ less traffic jams.
- Railways are narrow thus economical in terms of land space.
- Trains are less prone to accidents.
- It is a cheap mode of transport/ low maintenance cost.

Any 3 x 1 = (3 marks)

(ii) **State four conditions of roads in Kenya that may lead to motor vehicle accidents.**

- Some roads have potholes/ uneven road surface.
- Some roads are steep/ have sharp bends.
- Some roads are slippery.
- Some roads are not marked/ absence of road signs.
- Some roads have loose surface/ dusty.
- Some roads are narrow.

Any 4 x 1 = (4 marks)

(c) *The sketch map below shows the Great lakes and St. Lawrence seaway. Use it to answer question c.*

See the question paper

(i) **Name the ports marked M and P.**

M Duluth
P Buffalo

(ii) **Lake marked N**

N Lake Huron

(d) **Explain four benefits of the Great Lakes and St. Lawrence seaway to the economies of U.S.A and Canada.**

- They have encouraged trade/agriculture in both countries by providing cheap means of transport.
- The dams constructed along the route provide hydroelectric power for domestic/ industrial use.
- They have led to growth of ports/ towns along the route which are focal points for various economic activities.
- They have created employment opportunities in the transport industry thus raising the standard of living of the people in the area.
- They are tourist attractions hence generate income for the countries.
- They are sources of water for domestic/ industrial use.
- The countries earn revenue from toll charges levied on ships that use the routes.

Any 4 x 2 = (8 marks)

10. (a) (i) **Name two settlement patterns.**

- Nucleated settlement/ clustered.
- Dispersed settlement/ scattered.
- Linear settlement.
- Radial settlement.

Any 2 x 1 = (2 marks)

(ii) **Explain four physical factors that influence the distribution of settlements.**

- Areas that receive reliable rainfall attract more people since they can engage in arable farming/ areas that receive low rainfall have fewer people as they are unsuitable for arable farming.
- Areas with cool/ moderate temperatures are densely settled as they can support agriculture/ human life./ Areas with extreme temperatures are sparsely settled as they are uncomfortable for human beings.
- Areas near water bodies attract dense settlements as the water is available for domestic/ industrial use/ poorly drained areas discourage settlement.
- Areas with fertile soils attract settlements as a wide range of crops can be grown/ poor soils discourage settlement as they are unsuitable for arable farming.
- Forested areas discourage settlements as they may be habitats for dangerous animals/ disease vectors.
- Gentle slopes are densely settled/steep slopes are sparsely settled.
- Surfacing slopes are densely settled because they are warmer for human/ crop survival.

Any 4 x 2 = (8 marks)

(b) (i) **Explain how the following factors have led to the growth of Thika town.**

Location

- Its proximity to Nairobi has led to industrial expansion as Nairobi acts as market to its products/ supplies/ people settle in Thika to be able to work in Nairobi/ industries have been set up in Thika due to congestion in Nairobi industrial area.
- Hinterland - Thika town is located in an area with a rich agricultural hinterland which provides raw materials for industries/ food for the population/ the hinterland is densely populated hence provides cheap labour.

Any 1 x 2 = (2 marks)

Transport

- It has a railway/ road connection which provides easy movement of food/ people/raw materials/finished products. (2 marks)

Land

- There is ample/ flat land for development of industries/ settlement.
- The cost of land is relatively cheaper hence attracts investors.

Any 1 x 2 = (2 marks)

(ii) **Apart from being a transport and communication centre, give three other functions of Thika town.**

- It is an industrial centre
- It is an educational centre.
- It is a commercial centre.
- It is a residential centre.
- It is an administrative centre.
- It is a recreational centre.
- It is a religious/cultural centre.

Any 3 x 1 = (3 marks)

(c) **Explain three positive effects of urbanization to a country.**

- It encourages national unity as people of different nationalities/ ethnic backgrounds interact.
- It promotes links between areas as transport/ communication networks tend to be focused in urban areas.
- It provides employment opportunities through establishment of commercial/ industrial activities/ attracts large population that provides labour.
- It leads to development of infrastructure both within the urban centres and the surrounding rural areas.
- It provides market for agricultural/ industrial goods produced in a country.

Any 3 x 2 = (6 marks)