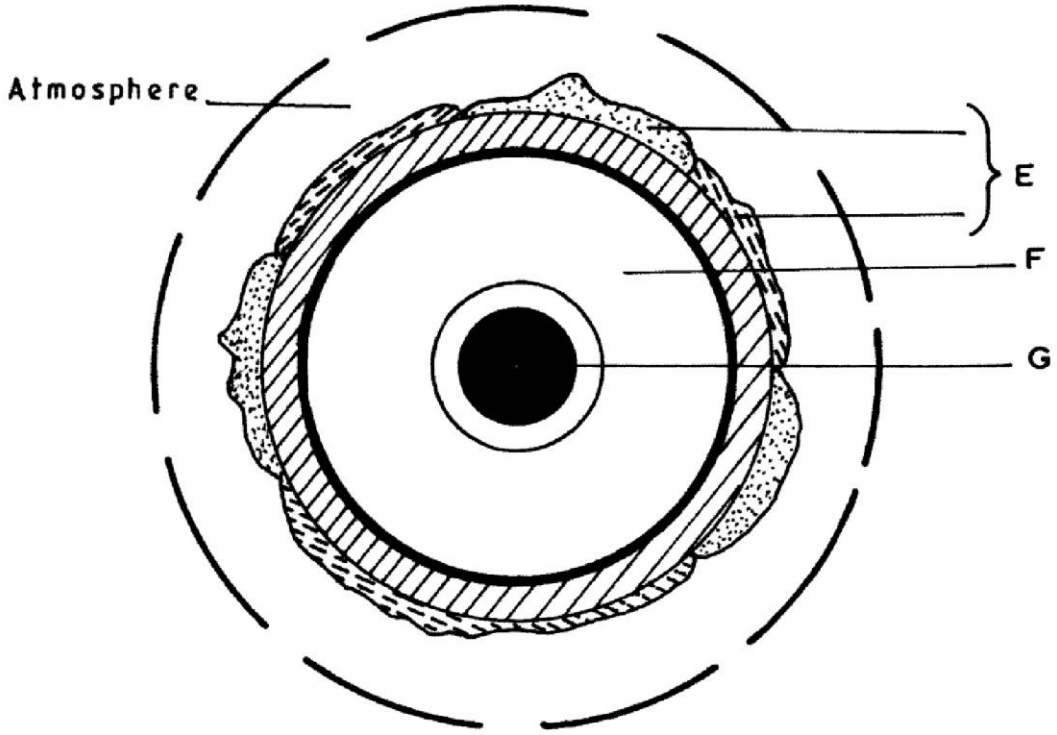
4.10 GEOGRAPHY (312)

4.10.1 Geography Paper 1 (312/1)

SECTION A

1. The diagram below represents the structure of the earth. Use it to answer question (a).



(a) The layer marked:

(i) E - Lithosphere/crust/sima/sial/hydrosphere/scal (1 mark)

(ii) F - Mantle/Asthenosphere (1 mark)

(iii) The minerals that make up the layer marked G. (2 marks)

- Iron and Nickle

(b) Give two effects of the rotation of the earth on its axis.

- The daily rise and fall of tides.
- The occurrence of day and night.
- A difference of 1 hour between two longitudes 15° apart.
- The deflection of winds/ocean currents.

any 2 x 1 (2 marks)

2. (a) What is a metamorphic rock?

This is a rock formed when the original/igneous sedimentary rock is subjected to chemically active fluids/pressure/intense heat which changes its form/structure/ composition. (2 marks)

(b) Give three examples of metamorphic rocks.

- Schist/homblende/mica;
- Slate;
- Marble;
- Quartzite;
- Gneiss;
- Graphite.
- Serpentnite (from peridolite)

Any 3 x 1 (3 marks)

3. (a) Name two types of boundaries according to the Plate Tectonic theory.

- Constructive/extension/divergent boundary.
- Destructive/compressional/ convergent boundary.
- Transform fault/conservative boundary.

Any 2 x 1 (2 marks)

(b) Give three effects of the movement of tectonic plates.

- Causes folding/related features of folding.
- Occurrence of vulcanicity/features related to vulcanicity.
- Subduction/oceanic trench.
- Occurrence of earthquakes.
- Causes faulting/features related to faulting causes continental drift.

Any 3 x 1 (3 marks)

4. (a) What is an earthquake?

It is sudden earth movement that causes vibrations within the earth's crust. (2 marks)

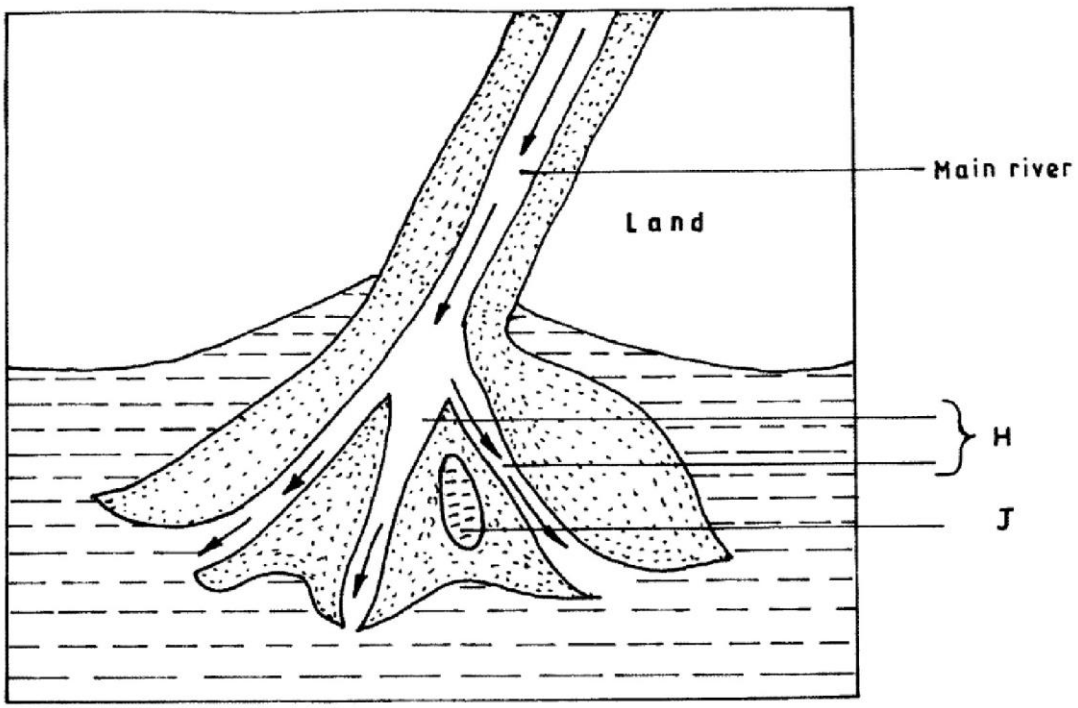
(b) Identify the scales used to measure:

(i) The intensity of earthquakes - Mercalli scale. (1 mark)
(ii) The magnitude of earthquakes - The Ritcher scale. (1 mark)

5. (a) Give three characteristics of a river in its middle stage.\

- the river flow is moderate.
- Lateral erosion is dominant.
- The river begins to meander.
- The river has a gentle gradient.
- The river deposits material in the convex banks.
- The river has several tributaries.
- The volume of water is high.
- The main features are river bluff/slip off slopes/open V shaped valley.
- Flood plains begin to form.

The diagram below shows a Bird's Foot delta.



(b) Identify the features marked H and J.

- H distributaries (1 mark)
- J Lagoon (1 mark)

SECTION B

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

6. Study the map of Busia 1:50,000 (sheet 101/1) provided and answer the following questions.

(a) (i) Convert the ratio scale of the map extract into a statement scale. (2 marks)
1 cm on the map represents $\frac{1}{2}$ km / 0.5 km on the ground. (2 marks)

(ii) What is the general direction of flow of river Sio? (1 mark)
North East to South West. (2 marks)

(iii) Identify the two dominant types of natural vegetation shown in the area covered by the map. (2 marks)

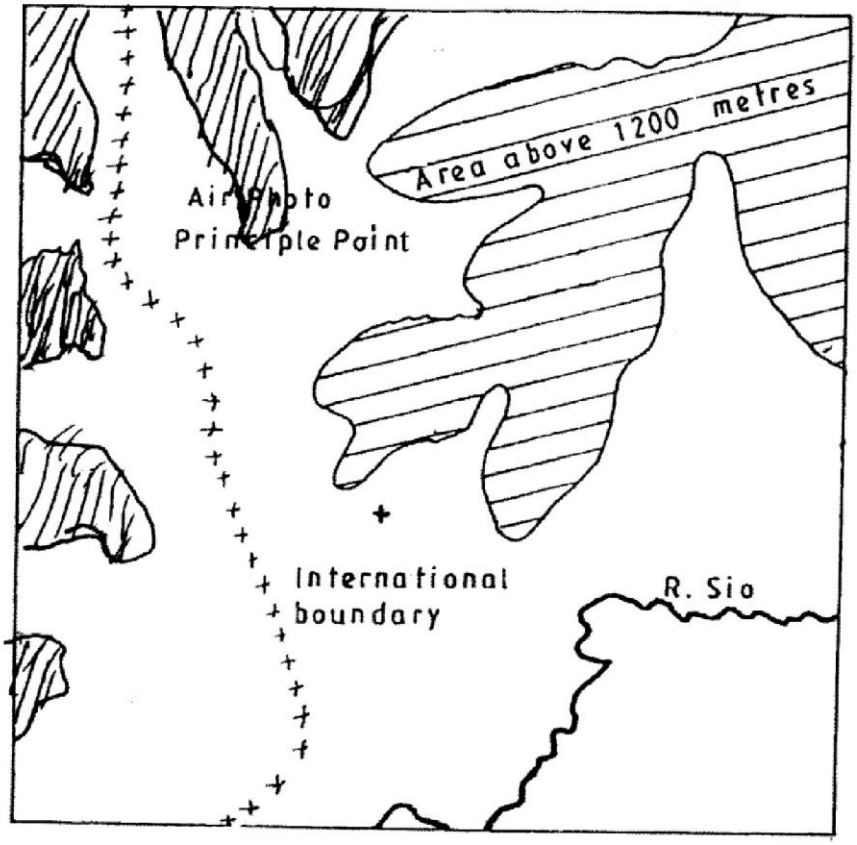
- Scrub;
- Papyrus swamp/vegetation;
- Scattered trees;
- Thicket;
- Three swamp vegetation;
- Riverine trees;
- Woodlands

Any 2 x 1 (2 marks)

(b) Draw a square 10 cm by 10 cm to represent the area west of Easting 30 and north of Northing 40. On the square mark and label:

(i) An International boundary. (1 mark)
(ii) An air Phot Principal Point. (1 mark)
(iii) River Sio. (1 mark)
(iv) The area above 1200 metres sea level. (1 mark)
(v) Correct drawing. (1 mark)

Diagram



(c) Describe the relief of the area covered by the map. (5 marks)

- The northern part of the area covered by the map is low lying, broad, flood plain.
- The land lies between 1160 metres and 1568 metres above sea level.
- The area towards the south western part is hilly/has numerous conical hills.
- The south western area has an elongated ridge.
- The area towards the east/west/North is gently sloping.
- There are several river valleys.
- There are steep slopes in the south western part of this area covered by the map.
- There are several passes/saddles/cors

Any 5 x 1 (5 marks)

(d) (i) Explain how the following factors have influenced the distribution of settlements in the area covered by the map.

Drainage

- Areas that are well-drained have many/nucleated settlements.
- Areas that are poorly drained/swampy have few/no settlements.
- There are no settlements near most rivers because they may be prone to flooding.

Any 1 x 2 (2 marks)

Transport

- Along the roads/motorable tracks there are linear settlements.
- At road junctions, there ar nucleated settlements.

Any 1 x 2 (2 marks)

(ii) Citing evidence from the map, state three functions of Funyula town. (6 marks)

Function	**Evidence**
- it is a residential centre	huts/built up areas
- it is an administrative centre	Chief's camp/chief's house, Police post
- it is a transport centre	All weather/loose surface road/motorable tracks
- it is a recreation centre	Rest house
- it is a commercial/trading centre	Market

Any 3 x 2 (6 marks)

7. (a) (i) Define the term weather. (2 marks)

Weather is the daily atmospheric conditions of a place at particular time.

(ii) Explain how the following factors influence weather.

- **Cloud cover:**
  - Thick cloud cover reduces the amout of solar radiation reaching the earth surface thus decreasing the atmospheric temperature.
  - Absence of cloud cover leads to an increase in diurnal range of temperature.
  - Thick cloud cover blocks terestial radiation from leaving the earth surface lower atmosphere thereby increasing the atmospheric temperature.
  - The type of cloud determines type/amount of rainfall.
  - The amount of cloud cover determines the intensity of sunshine received on the earth surface.
  - Shape/height/movement of clouds determines the type of weather that is likely to occur.

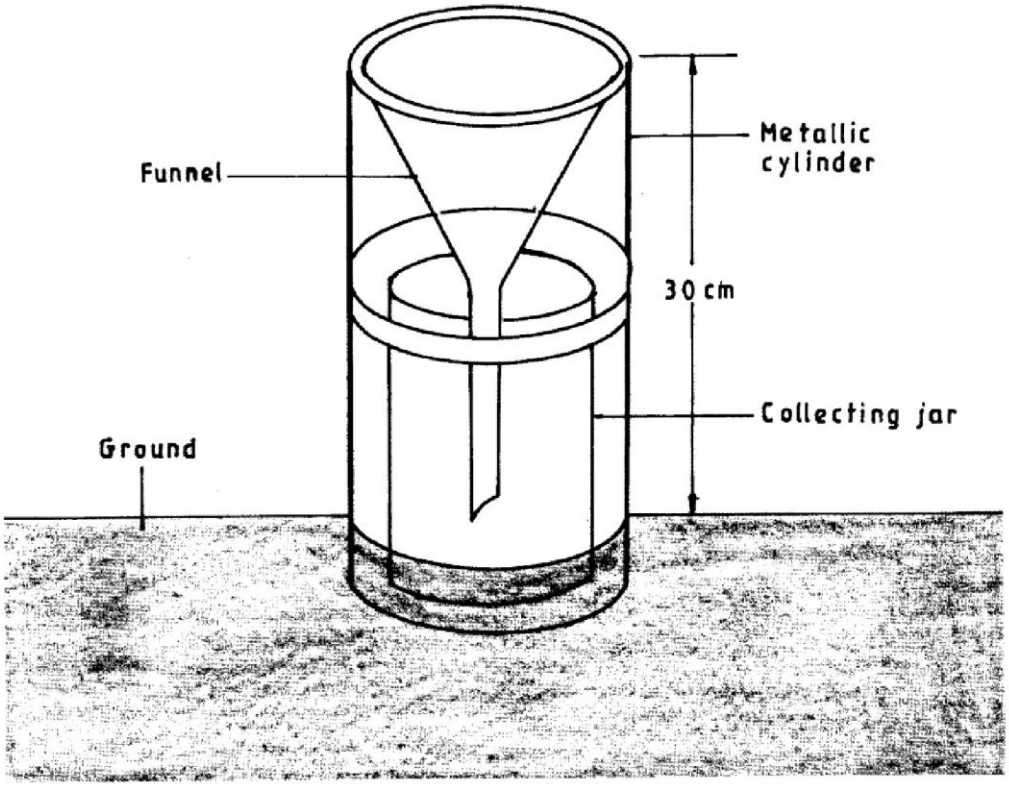
  Any 2 x 2 (4 marks)

- **Local winds:**

- Warm winds blowing over an area bring the warming effect thereby raising the temperature of the place.
- Cold winds blowing over an area bring the cooling effect hence lowering the temperature of the place.
- Moist winds passing over a region drop moisture as precipitation/increase humidity.
- Dry winds passing over a region bring a drying effect/aridity/lower humidity.

Any 2 x 2 (4 marks)

The diagram below represents a weather measuring instrument. Use it to answer question (b).



(b) (i) Which element of weather is measured using the instrument shown?

- Rainfall. (1 mark)

(ii) Describe how the above instrument is used.

- The instrument is placed in an open area and rain water collects in the jar.
- The metal collecting jar is removed from the metal holder.
- The water is poured into a measuring/graduated cylinder.
- The reading is taken/recorded.
- The water is emptied and the instrument is placed outside to collect more water for measuring the following day.

Any 3 x 1 (3 marks)

The table below shows the temperature and rainfall readings for station T in one week. Use it to answer question (c).

Day	Mon	Tue	Wed	Thur	Fri	Sat	Sun
Temp°	23	23	24	21	25	25	23
Rainfall in mm	50	49	55	45	60	60	49

(c) (i) Calculate:

- The range of temperature for the week.

$25^\circ C - 21^\circ C = 4^\circ C$ (1 mark)

- The Mean weekly rainfall. (2 marks)

$$\frac{50 + 49 + 55 + 45 + 60 + 60 + 49}{7}$$

$$\frac{368}{7} = 52.57 \text{ mm}$$

≈ 52.6 mm (2 marks)

(ii) State four characteristics of the weather in station T.

- The lowest temperature of the station is 21° C.
- The highest temperature of the station is 25° C.
- The Mean weekly temperature of the station is 23.4° C./moderate
- The highest amount of rainfall for the station is 60 mm/Friday/Saturday.
- The lowest amount of rainfall for the station is 45 mm/Thursday.
- There is rainfall throughout the week.
- There is low weekly temperature range /4° C.
- It is hot and wet throughout the week.
- There is high rainfall /368 mm.

Any 4 x 1 (4 marks)

(d) Give four characteristics of the stratosphere.

- It extends from 15 - 50 km (equator) and (8 - 50 km) at the poles.
- The lower part of it has constant temperature/is othermal layer.
- It has little/no water vapour.
- Temperature increase with increase in height at the upper layer/negative lapse rate/ temperature inversion.
- Temperature ranges from 80° C - 0° C
- It is mainly composed of O-zone gas.

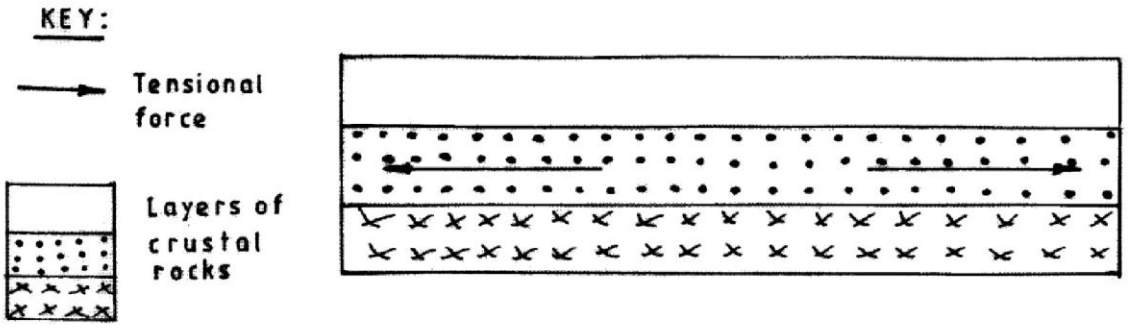
8. (a) (i) Apart from the Rift Valley, name three other relief features formed as a result of faulting.

- Escarpments/scarp slopes.
- Tilt blocks.
- Fault steps.
- Block mountains/horst/fault block.

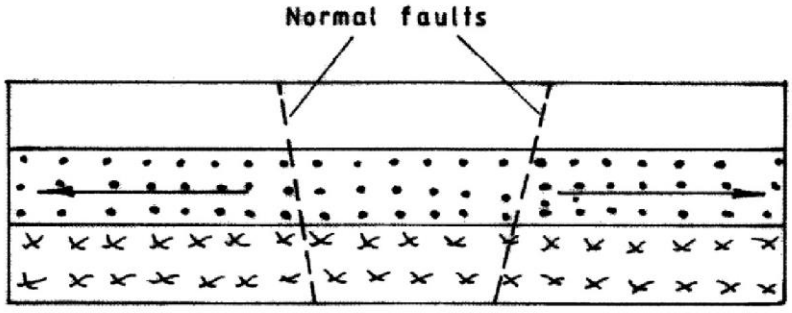
Any 3 x 1 (3 marks)

(ii) With aid of diagrams, describe how the great Rift Valley may have been formed by tensional forces.

- Layers of rocks are subjected to tensional forces when there is some instability within the earth's crust.

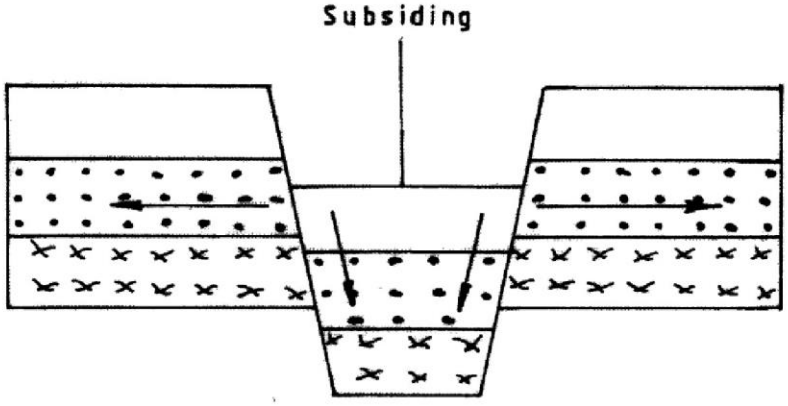


- Parallel normal faults/parallel lines of weakness develop.



- With time, the middle part sinks/subside as the side blocks are pulled apart.

Diagram



- The sunken middle part forms a depression/trough known as the Rift Valley.

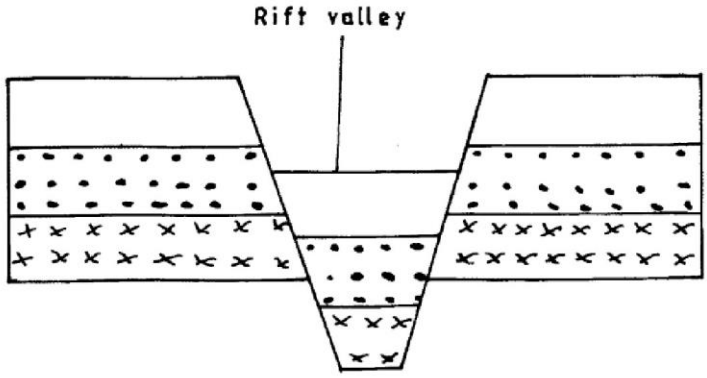


Diagram 4 x 1 (4 marks)
Text 4 x 1 (4 marks)

(b) Explain **three** ways in which faulting may influence drainage systems.

- Uplifting of landscape which leads to faulting may cause rivers to reverse their direction of flow/ back tilting.
- Vertical faulting across a river may cause a change in the local base level resulting in the formation of a waterfall.
- Basins/depressions resulting from faulting may be filled with water to form lakes/inland drainage basins.
- Some rivers flow along fault lines forming fault guided drainage patterns.
- Some rivers may disappear into the ground through a fault forming underground streams.
- Uplift of some river channels may cause river rejuvenation.
- Faulting may expose underground water leading to formation of springs.

Any 3 x 2 (6 marks)

(c) Describe **four** ways in which features resulting from faulting are of significance to the economy of Kenya.

- Highlands /fault blocks formed through faulting are sources of rivers which provide water for agricultural/domestic/industrial use.
- Faulting leads to formation of features that form beautiful scenery which promote tourism.
- Faulting leads to the formation of lakes that are important fishing grounds/mining sites / irrigation.
- Faulting has led to exposure of minerals that are mined to generate income.
- The highlands formed through faulting influence the formation of relief rainfall on the windward side which favours agriculture/forestry/ settlement.
- Formation of faults scarps creates deep faults which are passages of steam jets that are harnessed to generate geothermal power.
- Fault scarps lead to the formation of natural waterfalls which are suitable sites for HEP production.

Any 4 x 2 (8 marks)

9. (a) (i) Apart from alternate wetting and drying, name **three** other processes of mechanical weathering.

- Exfoliation/onion peeling/spalling
- Block disintegration/block separation
- Pressure release
- Granular disintegration
- Frost action
- Crystal growth

Any 3 x 1 (3 marks)

(ii) Describe the following processes of weathering:

- **Alternate wetting and drying**

- During the wet season surface rocks such as clay/shale absorb water causing them to swell.
- During the dry season these rocks dry out causing the outer surface to shrink.
- Repeated wetting and drying weakens the rocks leading to cracking/ slaking.
- These rocks break away from the main rock.

Any 3 x 1 (3 marks)

- **Hydrolysis**

- This is a process in which hydrogen ions/hydroxyl ions in water react with mineral ions in a rock.
- This reaction leads to formation of new chemical compounds in the rocks.
- With alteration of the original minerals, the rock becomes weak and disintegrates/decays.

Any 2 x 1 (2 marks)

- **Carbonation**

- It involves rain water dissolving carbon 4 oxide in the atmosphere forming a weak carbonic acid.
- The carbonic acid reacts with calcium carbonate in rocks to form calcium bicarbonate solution.
- Calcium bicarbonate solution is removed by running water.
- This leads to the weakening/disintegration of the rock.

Any 3 x 1 (3 marks)

(b) (i) State **three** conditions that influence the process of solifluction in mass wasting.

- The presence of a gentle slope.
- The occurrence of alternating warm and cold season.
- Presence of a permafrost layer/frozen ground/bedrock.
- Unconsolidated saturated weathered materials/debris.

Any 3 x 1 (3 marks)

(ii) Give **three** negative effects of mass wasting on the physical environment.

- Destruction of vegetation.
- Blockage of rivers/disruption of flow of rivers.
- Exposure of land to agents of soil erosion.
- Loss of life/property.
- Results in the formation of scars on the land/derelict land.

Any 3 x 1 (3 marks)

(c) You are planning to carry out a field study on types of mass wasting.

(i) Identify **three** methods you would use to collect data.

- Observation
- Photographing/video recording
- Interviewing
- Content analysis

Any 3 x 1 (3 marks)

(ii) Give th**ree** types of rapid mass wasting you are likely to observe during the field study.

- Mudflow
- Landslide/slump/debris slide/rock slide/rockfall/avalance
- Earthflow

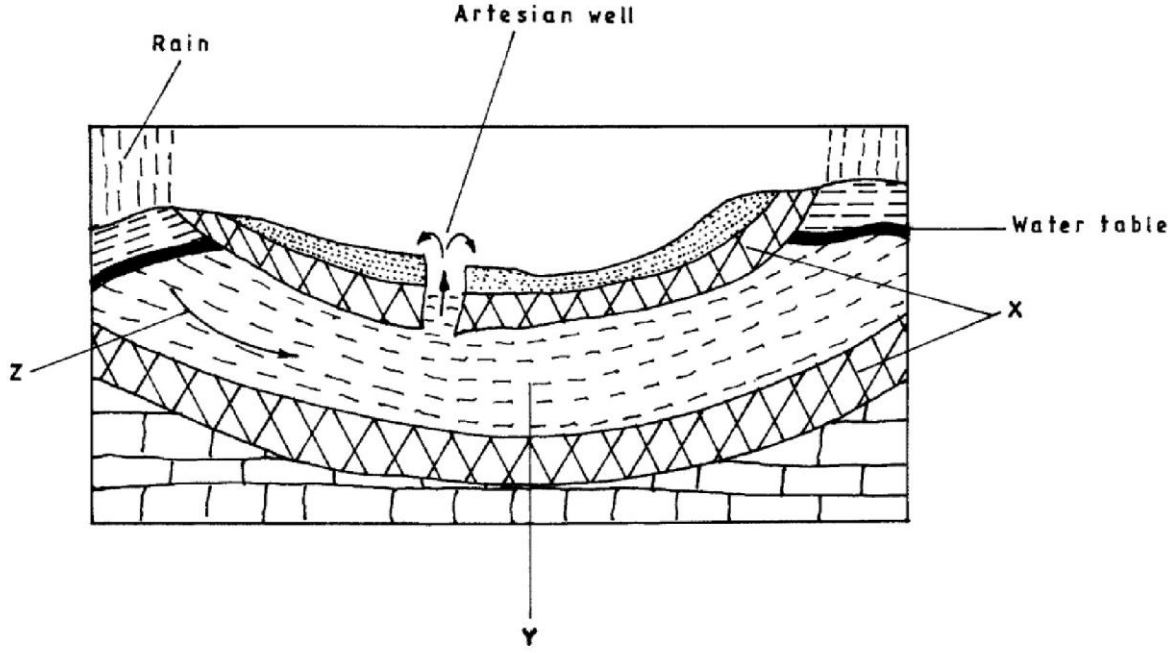
Any 3 x 1 (3 marks)

(iii) State two ways in which the information collected during the field study would be useful to the local community. (2 marks)

- It would be used to plan for precautions/safety
- It would be used in the conservation of land.
- It would be used as a basis for further research.

Any 2 x 1 (2 marks)

10. The diagram below represents an artesian basin. Use it to answer question (a).



(a) Identify:

(i) the features marked x and y.
x - Impermeable rocks (1 mark)
y - Aquifer (1 mark)

(ii) the process marked z.
z - Percolation (1 mark)

(b) Explain how the following factors influence the amount of underground water in limestone areas.

(i) Rainfall

- When rains last for long hours it enhances infiltration thereby replenishing the underground water sources.
- Heavy rains saturate the surface blocking air spaces thus reducing the rate of infiltration/leading to low amount of underground water.
- Little rainfall/no rainfall leads to low amount of under ground water.

Any 2 x 2 (4 marks)

(ii) Vegetation cover

- Presence of vegetation cover reduces the speed of surface runoff hence increasing the rate of infiltration/leading to high amount of underground water.
- Presence of vegetation cover breaks the force of raindrops giving water more time to infiltrate hence increasing the amount of underground water.
- In areas of scanty vegetation/on bare ground the surface runoff is high hence reduce rate of infiltration/leading to low amount of underground water.
- Presence of vegetation cover provide shade in the ground reducing direct loss of water through evaporation hence increasing the rate of infiltration leading to high amount of underground water.

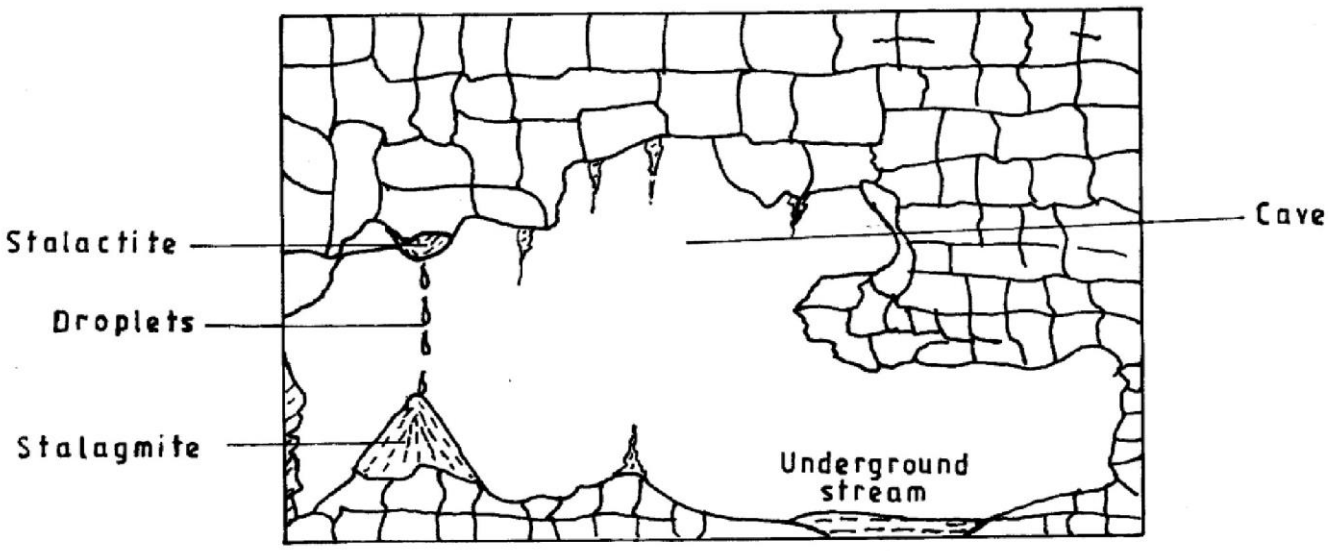
Any 2 x 2 marks (4 marks)

(c) (i) Apart from stalagmites name **three** other underground features formed in limestone areas.

- Stalactites
- Limestone/pillars/columns
- Caves/caverns
- Underground rivers

Any 3 x 1 (3 marks)

(ii) With aid of a diagram, describe how a stalagmite is formed.



- A solution of calcium hydrogen carbonate drips down slowly through the roof of the cave/hang on the roof of the cave.
- As the solution continues to drip from the roof, it splashes on the floor of the cave.
- Water evaporates and the calcium carbonate precipitates.
- The precipitated calcium carbonate gradually builds upwards to form a Stalagmite.

Diagram (5 marks)
Text (5 marks)

(d) Give **three** reasons why there are few settlements in Karst landscapes.

- The areas have thin/poor soils.
- The areas are rocky/have rugged surfaces
- There is inadequate surface water supply.
- The areas have poor/scanty vegetation.

Any 3 x 1 (3 marks)

4.10.2 Geography Paper 2 (312/2)

SECTION A

1. (a) **Define the term environment**
It is the sum of all the external conditions/influences affecting the life/development of organisms. (2 marks)

(b) **Give three effects of air pollution in major urban centres**
(i) causes poor visibility/haze/smog
(ii) causes respiratory diseases/skin cancer in humans
(iii) leads to acidic rain
(iv) causes increase in air temperature
(v) causes stunted growth in plants Any 3 x 1 = (3 marks)

2. (a) **Identify three factors that influence the occurrence of minerals**
(i) vulcanicity
(ii) metamorphism
(iii) denudation/weathering/erosion
(iv) earth movements/folding
(v) evaporation
(vi) sedimentation/deposition Any 3 x 1 = (3 marks)

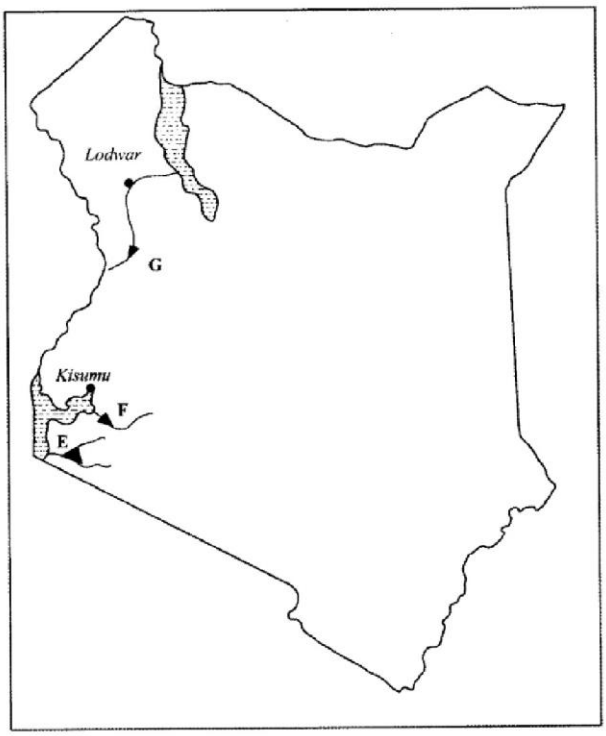
(b) **Name the areas where the following minerals are mined in Kenya**
(i) diatomite - Kariandusi (1 mark)
(ii) salt - Magadi/Malindi/Ngoleni/Magarice/Ngongori (1 mark)

3. (a) **Distinguish between forest and forestry**
A forest is a continuous cover of trees over a large area while forestry is a science of developing/managing forests. (2 marks)

(b) **Identify three activities that may be undertaken in your school to conserve trees.**
(i) Planting trees/establishing a tree planting day within the school calendar.
(ii) Establishing tree nurseries
(iii) Establishing tree planting/environmental clubs to create awareness on conservation
(iv) Using alternative sources of energy
(v) Taking care/protection of young trees/watering/that mulching
(vi) Using energy save jikos/stoves
(vii) Using alternative sources of construction material
(viii) Pest/disease control Any 3 x 1 = (3 marks)

4. **Give four challenges facing nomadic pastoralism in Kenya**
(i) Shortage of water
(ii) Scarcity of pasture
(iii) Outbreak of animal diseases/rinderpest/foot and mouth/tripanosomiasis
(iv) Attacks by animal pests/ticks/tsetseflies
(v) Inadequate veterinary services
(vi) Poor marketing strategies
(vii) Cattle rustling/raids/attacks by wild animals
(viii) Decrease in grazing land/competition from other land uses. Any 4 x 1 (4 marks)

5. **Use the map of Kenya below to answer question (a)**



(a) **Name the hydroelectric power projects marked E, F and G**

E - Gogo (1 mark)
F - Sondu Miriu/Sangoro (1 mark)
G - Turkwel (1 mark)

(b) **State three advantages of geothermal power as a source of energy**

(i) It is a clean source of energy/non pollutant
(ii) The cost of production is low
(iii) It has minimal environmental degradation
(iv) It is a renewable source of energy
(v) It is a reliable source of energy

Any 3 x 1 = (3 marks)

SECTION B

*Answer question 6 and any other **TWO** questions in this section*

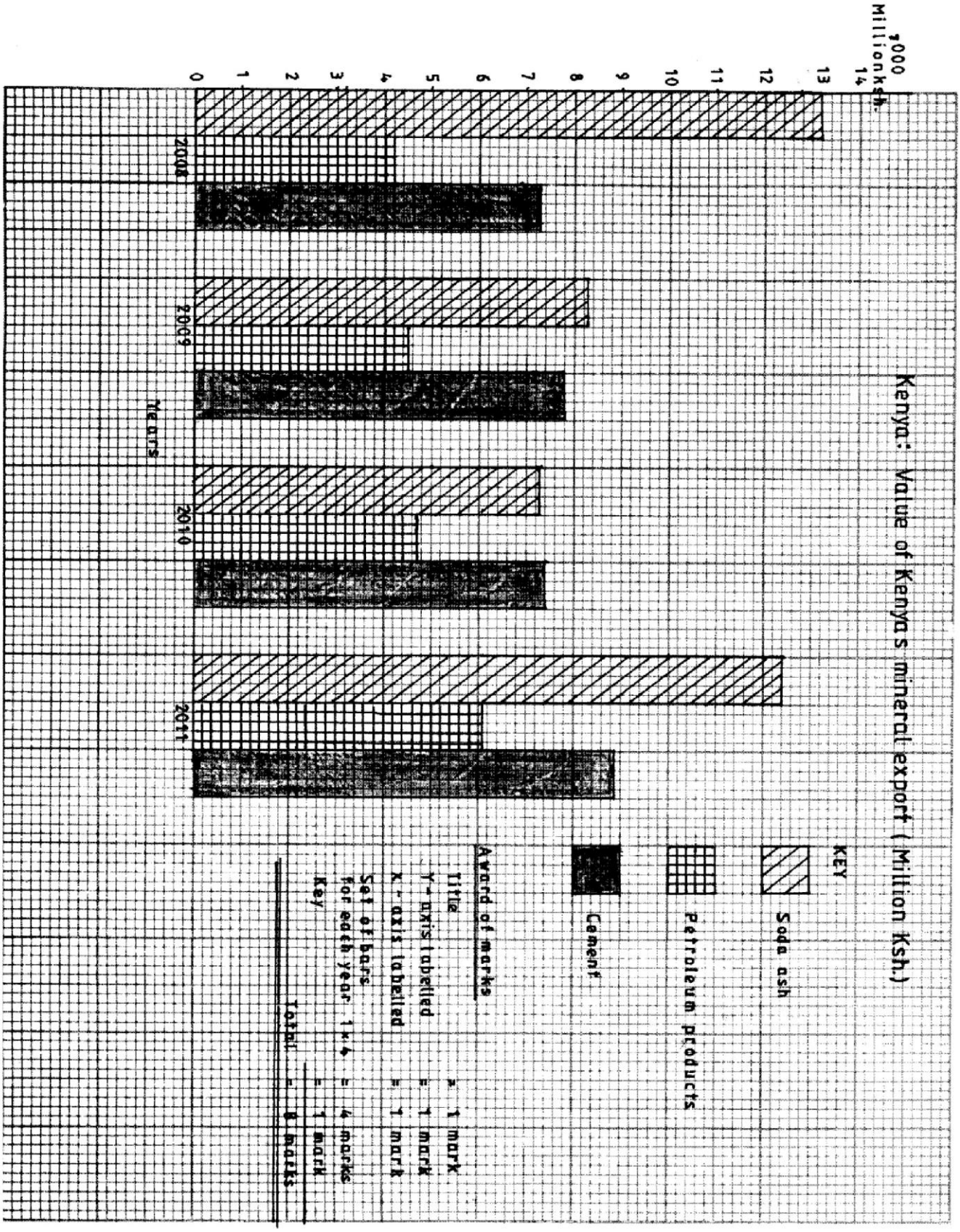
6. **The table below shows the value of some of Kenya's mineral exports from 2008 to 2011. Use it to answer questions (a) and (b)**

Value of Kenya's mineral exports (Million Ksh.)

Mineral \ Year	2008	2009	2010	2011
Soda Ash	13200	8300	7300	12400
Petroleum Products	4200	4500	4700	6100
Cement	7300	7 800	7 400	8900

Source: Central Bureau of Statistics

(a) (i) **Using a scale of 1 cm to represent 1000 million Kenya shillings, draw a comparative bar graph to represent the data shown.**



(ii) **State three advantages of using comparative bar graphs to represent statistical data.**

- They give a clear visual impression on total values
- They are easy to read/interpret the values for each bar
- They are easy to compare the values of commodities
- They can be used to represent a wide range of data
- They are easy to draw/constuct

Any 3 x 1 = (3 marks)

(b) **Calculate the percentage increase in value of exports between the year 2010 and 2011**

Soda Ash

Increase in value = 12,400 - 7,300 = 5,100

Percentage increase = $\frac{5,100}{7,300} \times 100 = 69.86\%$ (2 marks)

Petroleum Products

Increase in value = 6,100 - 4,700 = 1,400

Percentage increase = $\frac{1,400}{4,700} \times 100 = 29.79\%$ (2 marks

Cement

Increase in value = 8,900 - 7,400 = 1,500

Percentage increase = $\frac{1,500}{7,400} \times 100 = 20.27\%$ (2 marks)

(c) **Explain the significance of trade to the economy of Kenya**

(i) Transport and communication network has been improved to facilitate the movement of goods/services

(ii) Employment opportunities have been created leading to improved standard of living

(iii) Demand for goods/services has led to the expansion/establishment of industries

(iv) Taxation on goods/services has earned the country revenue

(v) Trade has encouraged specialization which leads to production of quality good/ services

(vi) Trading activities have led to the development of settlements providing market for good/services

(vii) Export of goods and services earns the country foreign exchange used in developing other sectors of the economy

(viii) Trade between Kenya and other trading partners enhances economic cooperation/international understanding

(ix) Importation of good/services that are not locally available for development of other sectors of economy.

(x) Leads to diversification of the economy hence increasing foreign/local earnings.
(xi) Trade stimulates exploitation of existing natural resources in order to have a wide range of exports.

Any 4 x 2 = (8 marks)

7. (a) **State three physical conditions which favour large scale sugarcane growing in Kenya**

(i) The presence of deep, well drained soil/black cotton /clay soils
(ii) High temperatures/between 21°C to 27°C
(iii) Gently sloping/undulating land which enables mechanization
(iv) High rainfall/1200mm to 1500mm, well distributed throughout the year
(v) Sunny conditions for sugar accumulation.

Any 3 x 1 = (3 marks)

(b) (i) **Describe the stages involved in the processing of sugarcane at the factory**

- The cane is received and weighed
- The cane is washed and chopped into small pieces
- The pieces are crushed to extract the juice
- The juice is put into clarifiers to filter off the impurities
- The juice is boiled to evaporate the water
- The juice is further stirred in large tanks to allow crystallization
- The crystals are separated from molasses
- The sugar is breached to whiten
- The sugar is then dried, cooled, graded, weighed and packed.

Any 6 x 1 = (6 marks)

(ii) **Give three by-products obtained from sugarcane**

- Bagasse
- Molasses
- Cane juice
- Filter cake/filter mud
- Jaggery

Any 3 x 1 = (3 marks)

(c) **Explain three ways in which the Kenya Government is promoting the sugar industry**

(i) Establishment of Kenya sugar Board to advise on production/marketing of sugar
(ii) Restricting sugar imports to protect farmers from the flooding of cheap sugar
(iii) Establishing a scheme for small scale outgrowers in production/marketing of sugar
(iv) Enforcing law to protect the exploitation of farmers by brokers
(v) Financing research for high yielding cane
(vi) Subsidizing farm inputs to lower the cost of sugarcane production.
(vii) Providing financial assistance to ailing sugar factories.

Any 3 x 2 = (6 marks)

(d) Your class visited a sugarcane plantation for a field study on land preparation and

planting of sugarcane

(i) **Outline four activities that you are likely to identify**

- Clearing of land
- Ploughing of the land
- Preparing seedlings/cuttings/dipping setts in pesticide
- Making furrows
- Planting seedling/cuttings in the furrows
- Weeding the crop/spraying with herbicides
- Application of fertilizers
- Harrowing
- Irrigation

Any 4 x 1 = (4 marks)

(ii) **Give three methods you would use to record data during the field study**

- Taking photographs
- Tape recording/video recording
- Drawing sketches
- Notes taking
- Filling in the questionnaire
- Tallying
- Tabulating

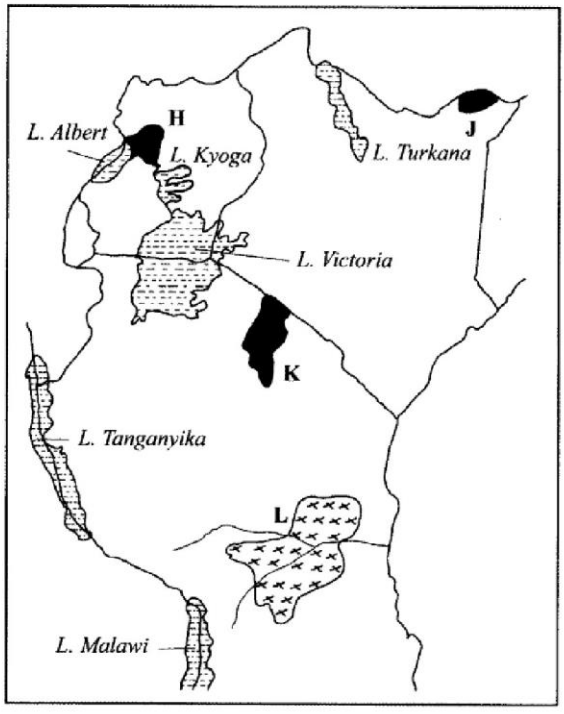
Any 3 x 1 - (3 marks)

8. (a) **Differentiate between domestic and international tourism**

Domestic tourism is the visit by people within their country for pleasure while international tourism is the visit by people away from their mother country to a given country for pleasure

(2 marks)

Use the map of East Africa below to answer question (b)



(b) **Name:**

(i) the national park marked H, J and K

(ii) The game reserve marked L

H	-	Murchison falls/kabarega	(1 mark)
J	-	Malka Mari	(1 mark)
K	-	Serengeti	(1 mark)
L	-	Selous	(1 mark)

(c) (i) **Explain how the following factors influence tourism in Kenya**

- Climate
- Scenery
- Tour companies

Climate

Kenya has a pleasant warm tropical climate/sunny conditions throughout the year that attracts tourists from temperate regions. (2 marks)

Scenery

Kenya has beautiful features such as lakes/mountains/the great rift valley/sandy beaches and vegetation that attract tourists.

Kenya has a variety of scenery that allow sports such as mountain climbing/ fishing/skating/water skiing.

Any 2 x 1 = (2 marks)

Tour companies

The tour companies charter flights/organize package tours which lower the cost of travel for tourists /facilitates movement of tourists. (2 marks)

(ii) **State five effects of floods on tourism**

- Inaccessibility to tourist sites
- Migration of wild animals
- Destruction of tourist sites/hotels/lodges
- Disruption of communication systems
- Loss of income by proprietors
- Water related diseases in tourist areas
- Drowning of people

Any 5 x 1 = (5 marks)

(d) **Explain four ways in which the County Governments in Kenya would promote sustainable tourism**

(i) Involving local communities in decision making to enhance positive perception on wildlife conservation

(ii) Fencing the parks (compensating persons aggrieved by wild animals) to minimise human-wildlife conflicts

(iii) Encouraging the use of alternative sources of energy/management of energy to

reduce the destruction of natural ecosystem/animal habitat

(iv) Improving waste management to reduce contamination of the environment

(v) Encouraging local tourism/lowering rates during the low season in order to have continuous use of tourist facilities

(vi) Conserving water to meet the needs of local communities/wildlife/tourists

(vii) Improve transport systems within their counties to facilitate movement of tourist

(viii) Advertise tourism activities within their county to increase awareness

(ix) Strengthening marketing/publicity of their tourist destinations to capture new sources of tourists

(x) Enforcing by-laws to strengthen security in game reserves/tourist sites

(xi) Planting trees to help in the conservation of the environment

(xii) Encouraging community tourism/home stays in order to benefit from the tourism industry/enhance hospitality

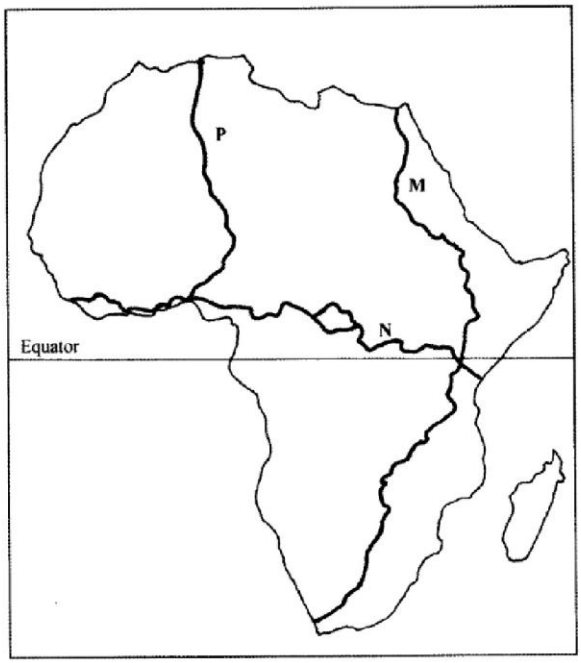
(xiii) Encouraging collaboration with the private sector to finance tourist activities.

(xiv) Establishing new tourist attractions to create diversity

(xv) Modeling existing tourist facilities to attract more people/visitors.

Any 4 x 2 = (8 marks)

9. **Use the map of Africa below to answer question (9)**



(a) Name the trans-continental highways in Africa marked M, N and)

M - The Great North Road (1 mark)

N - The Trans-Africa Highways (1 mark)

P - Algeria-Lagos Highway/Trans-saharan Highway (1 mark)

(b) (i) **State four advantages of air transport**

- It is a fast means of transport
- It operates on fixed schedules that allows for prior planning
- It has a minimum risk/damage of cargo
- It is the most comfortable means of transport over long distances
- It has limitless scope of operations
- It allows access to remote areas

Any 4 x 1 = (4 marks)

(ii) **Explain four efforts that the Kenya Government has taken to improve air transport**

- Expansion of existing airport/improvement of airport facilities to cope with increased air traffic
- Training personnel in modern aviation technology to improve service delivery
- Promoting budget flights/package tours to lower the cost of travel/lower operational costs
- Enhancing security around the airports to reduce crime/lower accident risks
- Installing modern navigational equipment to increase efficiency in service delivery
- Encourage partnership with established airlines in order to get capital for expansion of air transport.
- Promotion of domestic air transport to maximise use of facilities.

Any 4 x 1 = (8 marks)

(c) (i) **Identify two types of communication**

- Oral/verbal communication
- Written communication
- Visual/audio-visual communication
- Sign language

Any 2 x 1 = (2 marks)

(ii) **Explain four problems facing communication in Africa**

- Africa has rugged terrain/physical barriers which makes the installation of communication equipment difficult
- Africa lacks sufficient capital to buy/maintain the communication equipment
- There is shortage of skilled human resource which has led to installation/ poor management of the communication systems
- The countries have different communication policies making the interconnection difficult
- Some countries have suffered periods of civil war/political unrest making it impossible to develop effective communication systems
- Vandalism/destruction of communication equipment leads to great losses and discourages further development.
- Low level of technology limits connectivity with other parts of the world

Any 4 x 2 = (8 marks)

10. (a) (i) **Give two main sources of population data**

- National census/head count
- Sample surveys
- Vital statistics / Registration of birth/death/marriage/migration
- Content analysis

Any 2 x 1 = (2 marks)

(ii) **Outline the information that can be derived from a population pyramid**

- The size of population
- The proportion of males and females
- The proportion of youthful/working/ageing population
- The composition of population by sex
- The dependency ration
- Birth/death rate

Any 3 x 1 = (3 marks)

(b) **Explain how the following factors have led to population increase in Kenya**

(i) **Cultural beliefs**

- Some cultures encourage large families due to preference of one gender to the other/prestige/wealth/source of labour some cultures discourage the use of contraceptives leading to couples getting many children.
- Some cultures encourages early marriages hence a longer child bearing period. (2 marks)

(ii) **Migration**

Political instability in some neighbouring countries has led to an influx of refugees leading to population increase. (2 marks)

(c) **Explain four problems which result from a high population growth rate in Kenya.**

(i) Kenya experiences a high unemployment rate (due to inability to create job opportunities to match the rapid increasing population) leading to low standards of living.
(ii) There is a high dependency ratio which leads to low saving by workers.
(iii) Increased demand for social ammenities has led to strain/congestion.
(iv) The high demand for land has caused land fragmentation/landlessness/ destruction of forest land
(v) The increased demand for food has led to food shortages.
(vi) Increased expenditure on social ammenities slows down economic growth.

Any 4 x 2 = (8 marks)

(d) **Describe four ways in which the population of Kenya differs from that of Sweden**

(i) The population of Kenya consists of mainly a large number of young people below 20 years of age while Sweden has an ageing population
(ii) Kenya's population has a relatively low life expectancy while Sweden has a high life expectancy
(iii) Kenya has a high population birth rate while that of Sweden is low
(iv) Kenya's fertility rate is high while in Sweden it is low
(v) Kenya's death rate is high while that of Sweden is low
(vi) Kenya's population growth rate is high while that of Sweden is low.
(vii) Kenya has a high dependency ratio while in Sweden it is low.
(viii) Most of Kenya's population live in rural areas while in Sweden mostly they live in urban centres.

Any 4 x 2 = (8 marks)