

**KCSE 2011 GEOGRAPHY
PAPER 1
MARKING SCHEME**

- 1 (a) J-North pole
K-South pole
- (b)
- There is a higher concentration of heating at M than at N because the surface area at M is small than at N.
 - The angle of the sun's rays at M is higher than at N hence the variation in intensity.
 - At N the sun's rays travel over a longer distance than at M thus losing the heat resulting to low intensity.
2. (a) Weathering is the breaking down/disintegration of rocks at or near the earth's surface in situ by physical or chemical process.
- (b)
- Climate
 - Nature of the rock
 - Topography/Angle of slope
 - Living organisms (flora and fauna)
 - Human activities
 - Time
- 3 (a) P- crater
Q- Lava layers
R- Dyke
- (b)
- Pressure is reduced causing the magma from the interior to reach the top of the volcano
 - The upper part of the main vent of the volcano is blocked
 - Pressure pulls up and the magma escapes through a side vent.
 - The successive outpouring of magma (through the side vent) builds alternative layers of ash and lava to form a conelet on the side of the composite volcano.
 - The conelet is the parasitic cone
4. (a) It is a mass of cool air blowing from the land to the sea during the night.
- (b)
- It lowers temperature of adjacent areas
 - It may increase rainfall
 - It may increase (relative) humidity.
 - It moderates diurnal range of temperature
 - It may lead to convectional rainfall
5. (a) E-Traction\ surface creep
F- Saltation
G -Suspension
- (b)



- Rock pedestal
 - Zeugens
 - Yardangs
 - Veritifacts |draikanter
 - Mushroom blocks\ cone
6. (a) (i) Latitude $0^{\circ} 00'$
Longitude - $37^{\circ} 45'E$
- (ii)
- Contours
 - Trigonometrical stations
 - Depression symbols
- (iii) Depression crates
- (iv)
- Medical services
 - Education services
 - Commercial services
 - Religion services
 - Communication
 - Transportation
 - Rehabilitation
- (b) (i) 7.0 ± 0.1
 $6.9 - 7.1$
- (ii)
- The rugged relief which may necessitate road cuttings/many road bends
 - Many rivers/river valleys may lead to the construction of many bridges\culverts
 - The high density of settlement may lead to high cost of compensation
 - The presence of Rurie swamp/swamps may lead to detouring of roads/tracks.
- (c)
- Availability of transport as shown by roads| tracks for movement of cattle or cattle products
 - The presence of many rivers/sources of water show that there is adequate water for cattle
 - The area has high altitude which provides cool conditions suitable for cattle rearing
 - The many cattle dips for treatment of cattle show that there is access to veterinary services.
 - Dense settlement to provide market for cattle products.
- (d)
- The main drainage features are rivers
 - The other drainage features are lakes and seasonal swamps
 - There is a high density of many rivers in the area



- The rivers are permanent.
- Most rivers originate from forest
- Most rivers from the forest flow Eastwards.
- Most rivers form a dendritic pattern.
- The main rivers are Kithinu and Thingithu
- Most rivers are the youthful stage
- Some rivers are bending/winding.

7.

(a)

(i)

- The area should be away from building/trees/tall objects
- The ground should be free from flooding
- The area should have a wide view/open space
- The area should be secure
- The ground should be gently sloping

(ii)

- It enables farmers to plan their farming activities
- It helps people to choose the clothing for the day
- It influences design of houses.
- It guides in the timing of sporting |tourist activities.
- It helps in averting natural disasters related to weather.
- It guides in landing and taking off of aircrafts.
- It helps in planning military activities.
- It guides fishing activities

(b) (i) The mean -16.1075^0 Or 16.08

(ii) Annual range of temperature -2.1^0c

(c)

- The climate conditions are generally cool
- The station receives high rainfall/2125m.
- The lowest rainfall (71mm) is received in December| the highest rainfall (323mm) is received in May.
- The temperature ranges from 15.0^0 in August to 17.1^0c in March/April. The annual range of temperature is small (2.1^0c).
- The area is wet receives rainfall throughout the year/There is no dry month.

(d) (i)

- Observation
- Interviewing
- Reading from secondary sources
- Administering questionnaires
- Taking measurement (rainfall)
- Reading instrument (thermometer)
- Filming, video taping and taking photograph.

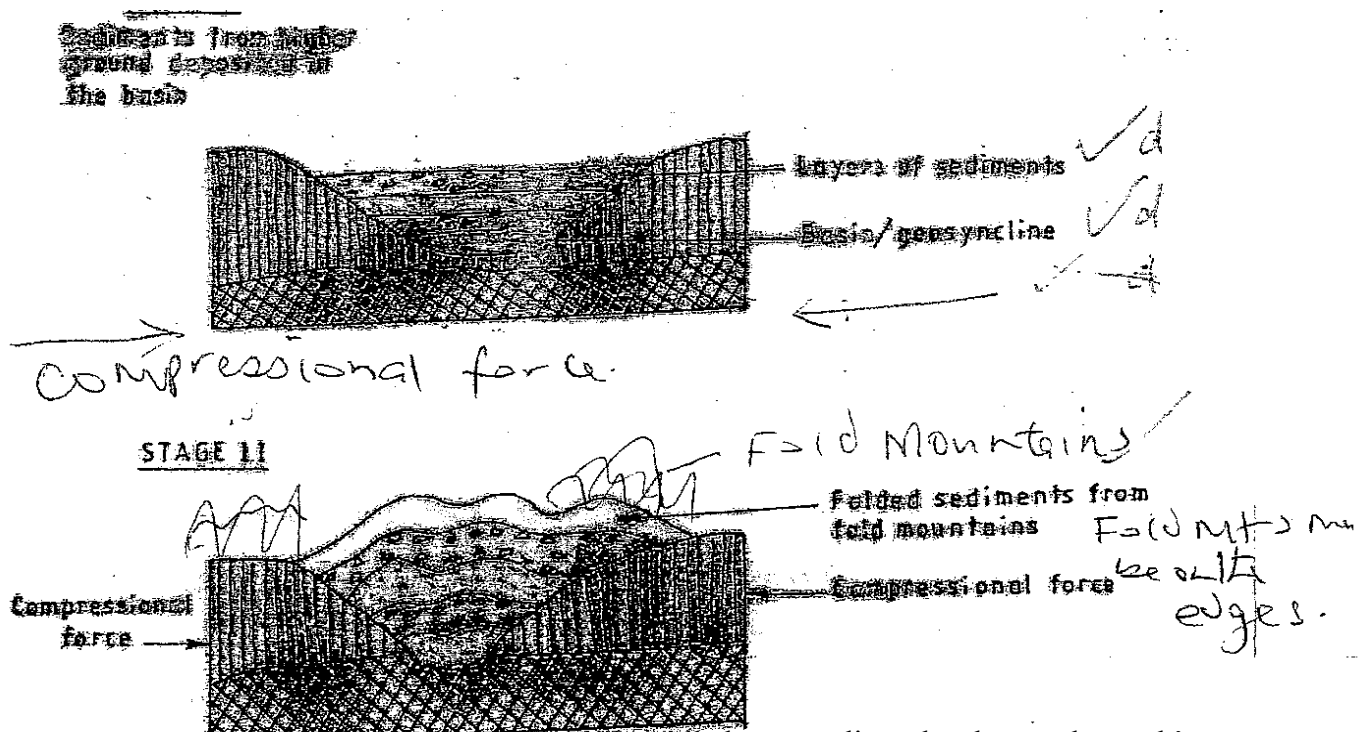
(ii)

- It enables students to collect first hand information
- It helps students to develop manipulative skills.



- It enables students to apply the knowledge learned in the classroom.
- It makes learning neat.
- It provides detailed| in depth| broader learning.
- It enhances visual memory.

8. (a) P – Ander
Q - Appalachians
R - Atlas
S – Himalayas
- (b) (i)
- Synclinal valleys (depression valleys)
 - Rolling plains
 - Ridges
 - Intermontane basins
 - Intermontane plateau
- (ii)



- Extensive shallow depressions called geosynclines develop on the earth's surface.
- Prolonged and extensive erosion occurs on the surrounding higher grounds.
- Sediments are deposited in the geosyncline forming thick layers.
- The weight of the sediments causes subsidence of the geosyncline leading to accumulation of more sediments to great thickness.
- Further subsidence of the geosyncline triggers off compressional forces which cause the sediments to fold.



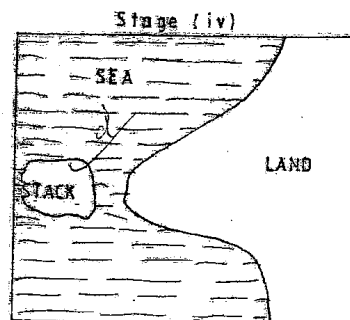
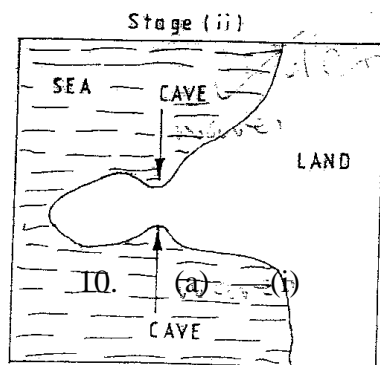
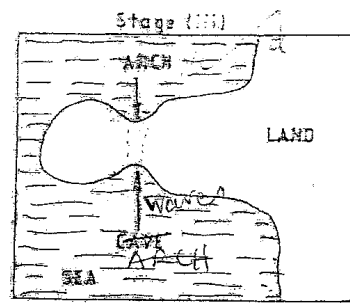
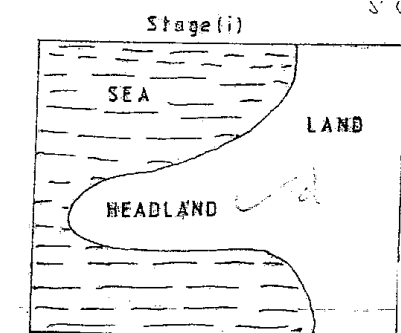
- The folded layers of sediments in the geosyncline are thrust upwards to form fold mountains along the edges of the geosyncline due to closeness of the source of the forces.
- (c)
- Fold mountains are sources of rivers that provides water for generation of H.E.P / domestic use/ irrigation/ industrial use.
 - Fold mountains are often forested and provide timber which is used in the building and construction industry/medicinal/aesthetic/wildlife habitat
 - Some fold mountains have exposed valuable minerals deposits which are mined
 - Fold mountains are tourist attractions/snow covered slopes encourage sporting activities thus earning countries foreign exchange
 - The wind ward slopes of fold mountains receive heavy precipitation which enhances agricultural activities
 - The rugged nature of some fold mountain landscapes hinder human settlement/agricultural activities
 - The leeward slope of some fold mountains create rain shadow effect which result into aridity discouraging crop farming/encourages livestock farming
 - Some fold mountains may act as barrier to transport and communication/make the construction of transport and communication lines difficult/expensive
9. (a) (i) Tides are the periodic rise and fall in the level of ocean/seas/large lakes as a result of the gravitational attraction of the sun and moon
- (ii)
- Differences in ocean water density/salinity
 - Differences in ocean water temperature
 - Winds blowing over the ocean
 - Shape of coastal land mass
 - Rotation of the earth
- (iii)
- Benguela
 - Guinea
 - Canary
- (b) (i)
- Gentle slope
 - The coasts have broad shallow indentation/estuaries
 - The coasts have several creeks/fjords
 - The coasts have extensive marshes/mudflats exposed at low tides
 - Broad continental shelves
- (ii)
- The duration of the exposure of the coast to wave erosion. The longer the exposure to coastal waves the higher the rate of erosion



- The degree of exposure of the coast to wave erosion. The exposed coast are eroded more than the sheltered coasts hence reducing rate of erosion
- The nature/supply of material. Heavy materials/boulders have a higher erosive power than fine materials
- The nature/structure of the coastal rock. A coast made up of soft rocks wears away easily when subjected to sea waves/when rocks are well jointed/fractures/unconsolidated are weak/soluble/composed of limestone/chalk are easily eroded.
- Native/strength of the destructive waves. Strong waves will cause greater erosion by hydraulic action and abrasive processes

(c)

- Waves attack both sides of a headland at right angle
- The waves erode through abrasion and hydraulic action forming caves on both sides of the headland
- Continued wave erosion and weathering leads to the elongation of the caves into the headland eventually the caves merge leading to formation of an arch
- The roof of the arch collapses leading to isolation of part of the headland on the seaward side
- The isolated headland is the stack



The waves/sea must be shown in all stages
One diagram to score a maximum of 4 marks.

Diagrams = 4 marks
Text = 4 marks
8 marks

A lake is an extensive body of water in a hollow/depression in the earth's surface

(ii)

- Challa



- Paradise
- Simbi
- Sonanchi
- A crater lake on central island of Lake Turkana

(b) (i) Corrie lake

- Snow accumulates in a pre-existing depression on the mountain side
- Snow gets compacted into ice forming a cirque glacier
- Abrasion by ice will deepen the motions
- Frost action/alternating freeze – the action enlarges the hollow
- Plucking process steepens the back wall
- Eventually a deep arm chair shaped depression known as corrie is formed
- When the corrie fills up with melt water it forms corrie lake

(ii) Oasis

- A pre-existing depression formed through faulting or otherwise is exposed to wind erosion
- Wind eddies remove unconsolidated materials through deflation
- Wind abrasion deepens and widens/enlarges the depression
- Further abrasion and deflation leads to the depression reaching the water table
- Water oozes out of the ground and collects into the depression to form a lake known as an oasis

(iii) Lagoon

- Sand and shingle are moved by the long shore current and deposited at the entrance of the bay
- The deposits accumulate forming a spit/sand bar/ridge
- The continued deposition elongate and raise the spit, eventually linking the two headlands forming a bay bar
- The bay bar separates part of the sea water from the open sea
- The enclosed sea water is the lagoon

(c) (i)

- They lack outlets to the sea
- Some have salt bearing rocks on the lake bed
- High temperatures in the surrounding area lead to high evaporation
- Heavy deposition of mineral salts into the lakes by surface run off
- Underground seepage of water that is rich in mineral salts

(ii)

Deforestation

- It exposes soil which is eroded and carried into the lake causing siltation
- It destroys catchment areas which reduces water fed into the lake

Industrialization



- Establishment of industries has led to disposal of waste/pollution/contamination of lakes
- Establishment of industries has led to increased water use which has lowered water levels.

Water weeds

- Emergence of water weeds has choked the lakes hindering effective exploration of lake resources
- Emergence of water weeds has hindered transport
- When the weeds rot, they affect the habitat of aquatic life
- When water is diverted in farms during irrigation it leads to lowering of water levels in the lakes
- Overuse of water for industrial processes leads to lowering of water levels in the lakes



**KCSE 2011 GEOGRAPHY
PAPER 2
MARKING SCHEME**

1. (a)
 - Aberdeen Angus
 - Hereford
 - Galloway
 - Charolais
 - Short horn
 - Sahiwal(b)
 - In both countries cattle are reared in areas of natural grazing/natural pasture
 - In both countries cross breeding of beef cattle is common/scientific method of beef production
 - In both countries beef cattle are reared in ranches
 - In both countries beef cattle/beef production are meant for local and foreign markets
 - In both countries the cattle breeds are largely similar
2. (a) Fisheries are water bodies where aquatic organisms/fish are found/reared for exploitations
- (b)
 - Restocking and over-fished area
 - Standardizing the mesh size of nets to be used in fishing
 - Licencing commercial fishermen to control their numbers
 - Restricting fishing to specific seasons
 - Restricting the disposal of untreated/waste into the sea/control of water pollution
 - Monitoring/discouraging the entry of foreign fishermen off the Indian Ocean waters
 - Enforcing the international conventions to protect endangered fish species
3. (a)
 - Saskatchewan
 - Alberta
 - Manitoba(b)
 - There is extensive cheap land that allows cultivation on a large scale
 - The fertile prairies soils require little application of fertilizers
 - The undulating landscape allows use of farm machinery/mechanization
 - There is suitable climate with a forest-free period/warm summers which allows for timely ripening and harvesting
 - The area receives moderate/average 560mm annually which suitable for wheat
4. (a)
 - The industries need large amount of water for cleaning
 - The industries use water for cooling machines



- The industries dispose off their waste materials through water
- Water provides cheap means of transport
- Some industries are located near large rivers that may provide H.E.P
- Water is used as a raw material in the industry
- Some industries use water to de-bark the logs

(b)

- Tobacco processing
- Pyrethrum processing
- Plant fibre processing/textile industries
- Saw milling
- Paper making
- Leather tanning
- Non-edible oil processing
- Rubber based industries
- Foot ware industries
- Glue making industries
- Pharmaceutical industries

5.

(a)

- There has been widespread immunization for children to control diseases
- The government provides free medical services for children/free mosquito nets
- The government provides parental education to ensure better care for children breastfeeding campaigns/family planning
- There is a government policy granting longer maternity/paternity leave for mothers to take care of the new born
- Research on infant related diseases has been stepped up
- The government encourages provision of homes for orphans
- Training of traditional midwives
- The government has increased/improved medical facilities

(b)

- It leads to under utilization of resources/slow economic growth
- It leads to reduced market for goods
- It leads to an increased ageing population in a country/leads to high dependency
- It leads to reduced labour force/productivity
- It is expensive to provide social security

6.

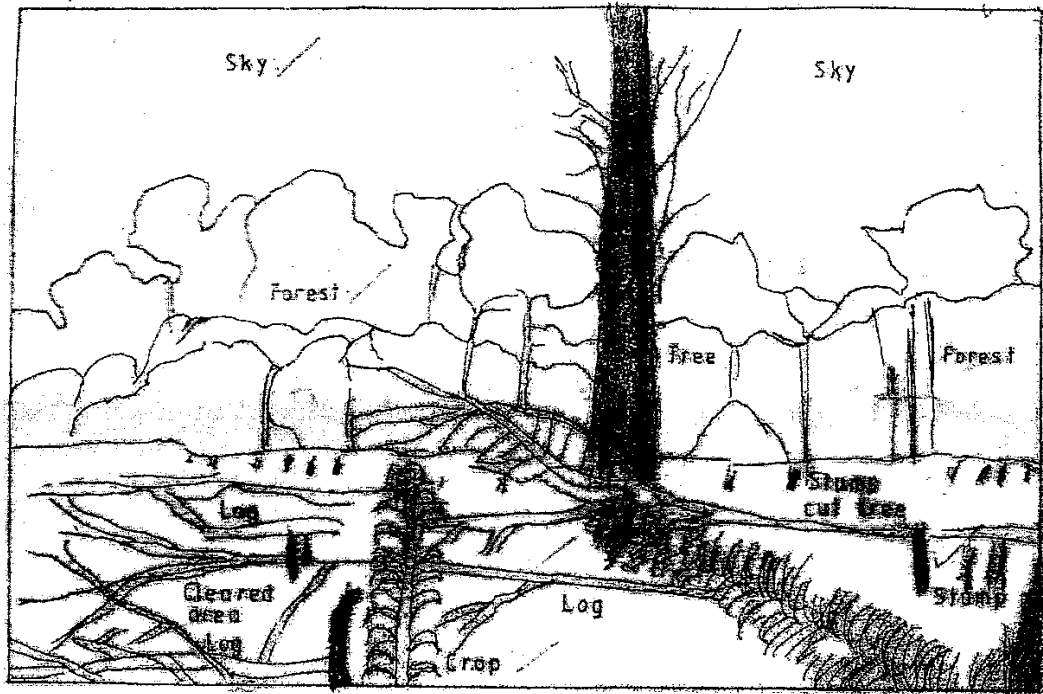
(a) (i)

- The photograph captures the broad view of area/a broad view of the area is captured
- The focus is on many objects
- The objects become progressively smaller towards the background

(ii)



(iii)



(iv)

- The forest has tall trees
- The trees have straight stems
- The forest has some shrubs/undergrowth
- Some trees have thin stems
- The trees are close to each other/dense forest
- The trees form different layers
- Some trees are umbrella shaped
- The forest is natural
- The forest has mixed species

(b)

- Gazettement of forest areas to delimit the area and reduce encroachment by the public
- Evicting people who have encroached forested areas in order to rehabilitate the forests
- Educating the public/creating awareness on the importance of conserving forests to gain their support
- Enacting/enforcing laws to prohibit cutting of trees within the gazetted areas
- Employing forest guards to patrol forest reserves to ensure that fires and illegal activities are managed
- Encouraging people to use other sources of energy in order to reduce the demand for wood fuel.
- Fencing off forested areas to keep away any intruders into the forest
- Encouraging people to practice agro-forestry to avoid dependence on forests.



(c)

(i) Tree harvesting

- In Kenya harvesting of trees is done throughout the year while in Canada harvesting is done in winter and early spring
- In Kenya harvesting is done selectively while in Canada clear/indiscriminate cutting of trees is done

(ii) Marketing of forest products

- In Kenya forest products are mainly sold locally whereas forest products in Canada are mainly exported

7.

(a) (i)

- E – R. Congo
- F – R. Zambezi
- G – R. Orange
- H – Kainji
- J – Nasser

(iii)

- The waterways should be dredged regularly to control siltation/maintain constant depth of the rivers and lakes for easier navigation.
- Dams/barrages should be constructed to control flooding hence allowing navigation
- Constructing canals/canalizing the rivers where waterfalls/rapids/rocks outcrops exist to bypass obstacles that hinder navigation
- Constant clearing/controlling the growth of vegetation to allow free movement of vessels
- Using modern vessels/ports/equipment to improve the efficiency of handling cargo/passenger service.
- Removal of rock obstacles from the river bed to allow navigation

(b)

- Technological efficiency in communication makes business transactions easier/faster
- Modern communication network allow for the spread of ideas/information for decision making which enhances economic development
- Communication promotes development of related industries/business opportunities
- Communication services provide employment opportunities
- Communication connectivity promotes mobility of labour
- Government derives revenue from communication services
- Communication facilitates marketing of products thus a wider market

(c)

- African countries use different railway gauges which makes it difficult to have an intergraded railway transport system/transshipment of goods.
- Construction of railways require large amounts of capital that most countries lack to extend/maintain the existing lines



- Accidents/vandalism/uprooting of the railway line causes great losses/delays in transportation
- Tropical storm waters at time wash away vital sections of the railway lines thereby disrupting transport/causes accidents
- Railway transport faces stiff competition from the more faster/flexible means of transport such as road and air transport
- Fueling/maintenance of railway stations and other related overhead costs are high thus reducing profit margin

8. (a) (i)

- In both countries green houses are used
- In both transport network is well developed
- Both countries have a variety of climatic conditions
- In both countries horticultural farming is practiced in areas with well drained soils.
- In both countries irrigation is carried out
- Both countries sell their horticultural produce in the local and international market
- In both countries large companies/private organization have invested in horticultural farming
- Use of advanced technology in both countries
- Availability of labour in both countries

(ii)

- The farms are generally small in size
- The farmers use advanced/highly specialized techniques of crop production/farmers use greenhouses
- Most farmers practice mixed farming
- The farms are intensively used
- Farming is largely labour intensive

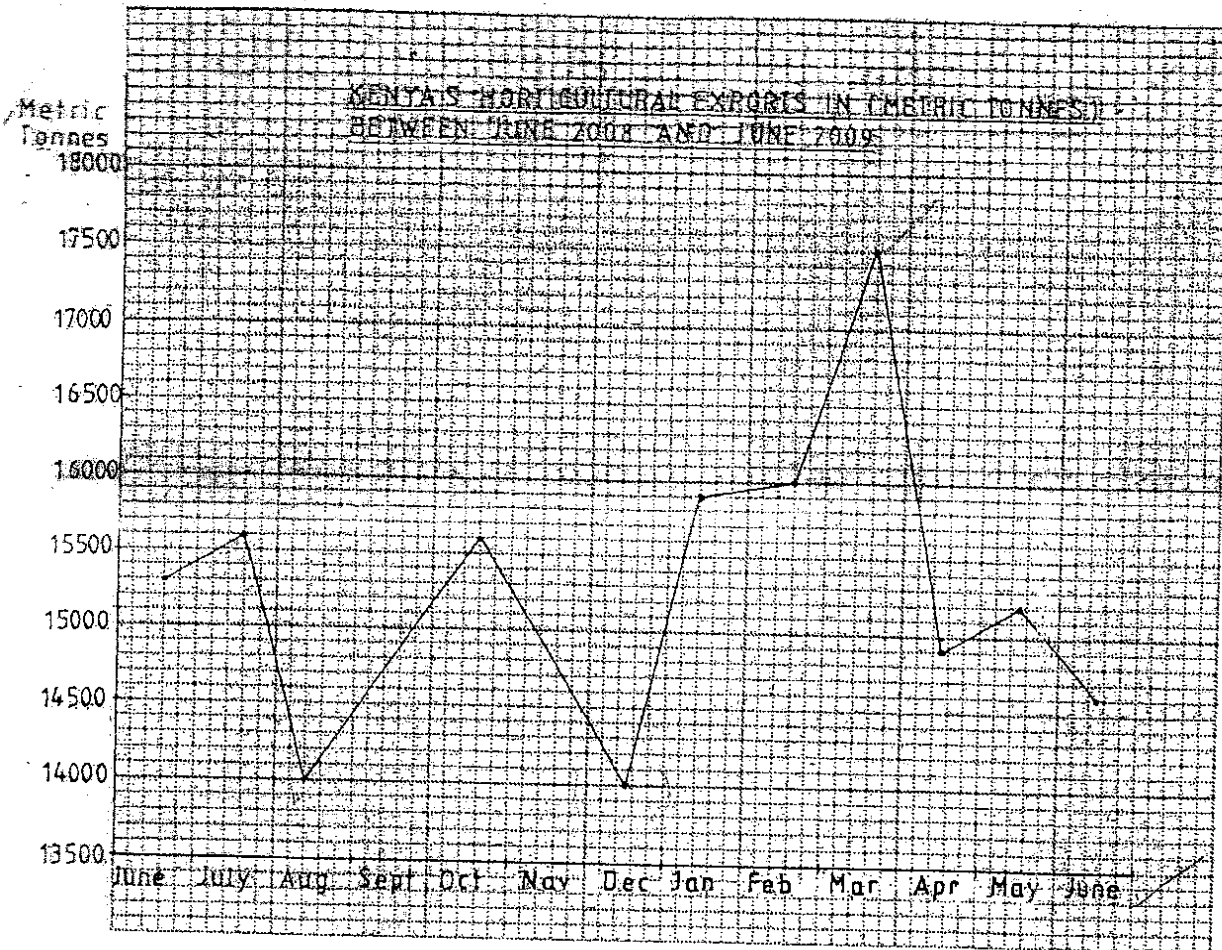
(b) (i)

- Kshs. 51,200 million/51200000000kshs/51.2 billion

(ii)

- The quantities of exports are fluctuating
- The lowest exports were in August 2008 and December 2008
- The highest quantity of export was in March 2009
- There was a significant drop in the quantity of exports between March and April 2009





Title - 1 mark

Y-axis - 1 mark

X-axis - 1 mark

Highest value - 1 mark

Lowest value - 1 mark

Total 5 marks

(c)

- The impassable roads during the rainy seasons/poor road network make it difficult for the perishable produce to reach the market on time hence causing losses to the farmers
- The cost of transporting produce by air is high thus lowering the profit margin
- Poor marketing structure/strategies leads to reliance on middlemen who exploit the farmers/farmers incur losses
- Low quality produce may lead to rejection/fetch low prices in the market hence making the farmers incur losses/farmers demoralized
- The farmers face stiff competition from established upcoming producers which limits the quantity the farmers are able to sell
- Stringent quality standards required at the international market increases the cost of production thus lowering the profit margin
- Fluctuation of the world market prices cause inconsistencies in the profits margin thus discouraging the farmers



- Limited preservation facilities/refrigeration facilities leads to spoilage of farmer's produce hence loses/wastage
- 9
- (a) It is the development and management of tourism while conserving the environment/its enjoying what nature provides while protecting it
- (b) (i)
- Marine parks
 - Historical sites
 - Sandy beaches/coral reefs/coastal scenery
 - Sunny/warm climate
 - Traditional culture
 - Water sports/beach sports
 - Wildlife
- (ii)
- Tourism has led to increase in drug abuse
 - A number of youths especially at the Coast have dropped out of school to become tour guides/beach boys/sex workers/curio sellers
 - Tourism has led to the spread of diseases such as S.T.Is.
 - Tourism has led to pollution of environment/National parks/game reserves
 - Over emphasis on tourism has led to the neglect of the other sectors of economy
 - Tourism has led to the increase in crime/insecurity
 - Tourism has encouraged poaching/illegal collection of marine resources
 - Tourism has led to international terrorism/piracy
 - It has led to erosion of social values/culture
- (c)
- The game reserves offer employment opportunities to the communities living near them
 - The management of the game reserves provide social amenities to the communities
 - The communities are allowed to graze their animals in the game reserves
 - Access roads to the game reserves benefits the communities
 - The income earned from the game reserves by the local authorities is used to provide services to the communities
 - Sometimes members of the community are given meat when animals have been culled
 - Educational institutions located near the game reserves have easy access for educational tours
 - Increased market for local products.
- (d)
- Kenya has local beaches while Switzerland has Lake side beaches
 - Kenya has tropical climate which is warm and sunny most of the year encouraging sun-bathing while Switzerland has temperate climate with cold winters which encourage winter sports



- Kenya has varied and beautiful Coastal Scenery/Rift Valley/Volcanic mountains while Switzerland has varied scenery consisting of snow-capped mountains/glaciated landscape
- Kenya being far from Europe gets fewer tourists than Switzerland which is centrally located in Europe
- Kenya's reports of insecurity scare away potential tourists but the reports of peaceful atmosphere in Switzerland encourage more tourists
- Kenya has poorly maintained transport network making it difficult to access some tourist sites while in Switzerland transport network is efficient
- Kenyans are not able to speak international languages hence communication with the tourists is sometime limited, whereas the diversity of languages spoken in Switzerland make it possible for tourists to communicate with ease
- The training of personnel in tourism industry in Kenya is less advanced than in Switzerland thus enabling the personnel to provide higher quality services to the tourists
- The accessibility to financial facilities such as use of credit cards by the tourists in Kenya is limited to large urban areas whereas in Switzerland similar facilities and services are widespread promoting easy transactions by tourists
- Kenyan's low purchasing power limits their ability to travel as tourists while in Switzerland the high purchasing power enables people to travel as tourists
- In Kenya animals are found in natural habitats while in Switzerland they are found in zoos

10. (a)

- A rural settlement consists of villages/scattered homesteads in the countryside where people engage mainly in agricultural activities/primary economic activities while urban centre is an area with dense population and people engaged mainly in industrial/commercial activities.

(b) (i) Relief

- Flat areas/flood plains are sparsely settled due to poor drainage/high incidents of water borne diseases
- Gentle slopes/lowlands are densely settled because they are conducive to agriculture/building houses/building roads
- Steep slopes are sparsely settled because they have thin soils making them unsuitable for farming/building roads
- High mountain tops are not settled because they are too cold for plant growth/human habitation
- Mountainous areas are thinly settled because of their steep/rugged nature makes them inaccessible
- The leeward sides of mountains are sparsely settled because they are dry and limits agricultural activities/inadequate water supply
- Wind ward sides are densely settled because they are wet and encourage agricultural activities/plenty supply of water



- Some hills have dense settlements because they are safe and secure

(ii) Climate

- Areas that receive high rainfall have dense settlements because they are conducive to a variety of agricultural activities
- Areas with low rainfall are sparsely settled because the climate limits economic activities
- Areas prone to strong winds are often not settled to avoid destruction of property by the wind
- Some valley bottoms have more settlements because they are warmer than the higher slopes of mountains
- Areas with high/extreme temperatures discourage settlements because of the unpleasant conditions
- Low to high temperature/cool to hot conditions encourage dense settlements because they are conducive to human habitation

(c) (i) Traffic congestion

- The construction of administrative/commercial/educational function (activities) in the CBD leads to movement of large numbers of people to and from the CBD especially during the rush hours
- The narrowness of the streets makes the movement of traffic around and out of the urban centre slow
- The increase in the number of commuters/vehicles that flock in the morning and evenings has outstripped the capacity of the existing space.
- Similar working schedules for most employees cause workers to report and leave work places at the same time leading to congestion
- Failure by motorists/pedestrians to comply to traffic rules interfere with smooth flow of traffic

(ii) Environmental degradation

- The smoke/exhaust fumes from factories/cars/residential houses cause air pollution/smog over the urban centres
- Careless disposal of effluents from factories/residential areas into water resources lead to water pollution
- Careless disposal/non-collection of garbage cause land pollution
- The construction of buildings/factories lead to destruction of the landscape
- Careless disposal of waste materials from construction sites leads to tip-heaps that degrade the environment

(d) (i)

- Nakuru
- Eldoret
- Nanyuki
- Kitale
- Nyeri
- Nyahururu



(ii)

- Educational centre
- Religious centre
- Residential centre
- Cultural centre
- Recreational centre
- Medical centre

