KENYA NATIONAL EXAMINATION COUNCIL

KCSE 2007

GEOGRAPHY
PAPER 2
MARKING SCHEME

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24.8.2 Geography Paper 2 (312/2)

1. (a)
   - Friesian.
   - Ayrshire.
   - Guernsey.
   - Jersey.
   - Alderney.
   - Brown swiss.
   - Holstein.

   (Any 2 x 1 = 2 marks)

   (b)
   - The landscape is gently sloping which is suitable for grazing.
   - The climate has warm and sunny summers that allow outdoor grazing.
   - There is cool climate suitable for pasture growing.
   - The moderate rainfall that supports growth of grass/fodder crops.
   - Soils are fertile to support high quality pasture.

   (Any 3 x 1 = 3 marks)

2. (a)
   - High temperatures throughout the year/23°C to 30°C.
   - High rainfall that is evenly distributed throughout the year (1500 to 2100mm).
   - High relative humidity of 80% to 90%.
   - Plenty of sunshine during the ripening season.

   (Any 2 x 1 = 2 marks)

   (b)
   - Competition from other vegetable oils.
   - Poor transport network.
   - Production of low quality oil.
   - Reduced production which has lowered the amount of oil exported.

   (Any 2 x 1 = 2 marks)

3. (a) (i) 8,800,000 barrels. ***(1 mark)***
   (ii) 21,150,000 barrels. ***(1 mark)***
   (iii) 2,550,000 ÷ 30 = 85,000 barrels. ***(1 mark)***

   (b)
   - Deposit of remains of flora and fauna over a long period of time.
   - Presence of non-porous rocks underneath the deposits of the flora and fauna.
   - Deposit of other layers of rocks over the remains of flora and fauna.
   - Compression of the remains of flora and fauna due to folding of the layers of rocks.

   (Any 3 x 1 = 3 marks)

4. (a)
   (i) ***The port marked P***: Quebec. ***(1 mark)***
   (ii) ***The canal marked Q***: New York State Barge Canal/ Erie Canal. ***(1 mark)***
   (iii) ***The lake marked R***: Lake Ontario. ***(1 mark)***

   (b)
   - It has increased internal and external trade.
   - It has facilitated the transportation of raw materials and finished products.
   - It has reduced the cost of transportation of bulky products.
   - The dams along the sea way provide HEP for industrial use.
   - It has led to the development of lake ports and towns which provide market/labour/housing facilities.
   - The reservoirs provide water for industrial use.

   (Any 3 x 1 = 3 marks)

5. (a)

- Natural calamities.
- Low nutritional standards/famine.
- Conflicts.
- Other epidemics/diseases.
- Inadequate medical facilities. ***(Any 2 x 1 = 2 marks)***

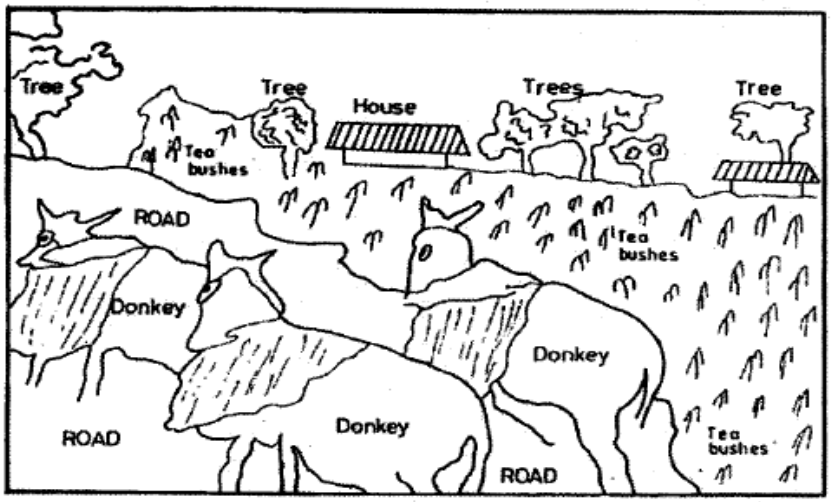
(b)

- The sickness leads to absenteeism from work.
- Money spent in treating the sick could be used for other economic activities.
- Deaths resulting from the disease lead to loss of economically productive population.
- Care-takers at family level use more time caring for the sick/orphans instead of engaging in economic activities. ***(Any 2 x 1 = 2 marks)***

6. (a) (i)

- It does not focus on a particular object.
- The objects become progressively smaller towards the background.
- It captures the general appearance of the area. ***(Any 2 x 1 = 2 marks)***

(ii)



(5 marks)

(iii)

- The type of houses.
- The mode of transport. ***(2 marks)***

(b)

- The land is cleared of vegetation.
- Land is ploughed/ tilled.
- Seedlings are planted in nursery and allowed to grow to 20 cm.
- Seedlings are transplanted on to the cleared land at the beginning of the rainy season.
- Seedlings are planted in rows, which are about 1.5 metres apart.
- The plants are weeded and manure applied regularly.
- Once the bushes start growing, the tips of their branches are pruned regularly to encourage the plant to form more branches.
- The crop is harvested every two weeks once it attains maturity.
- After harvesting, the green tea leaves are transported to the factory within 24 hours. ***(Any 6 x 1 = 6 marks)***

(c) (i)

- Embu.
- Meru North.
- Meru South.
- Meru Central. ***(Any 2 x 1 = 2 marks)***

(ii)

- It establishes tea nurseries from where tea farmers buy tea seedlings.
- It organizes farmer education days/provides extension services for the farmers to learn new ideas about tea growing.
- It buys farm inputs in bulk and sells to the farmers at low prices.
- It provides credit facilities to the farmers to enable them purchase farm inputs.
- It collects the green tea leaves and delivers to the factory on behalf of the farmers.
- It establishes factories where the green tea leaves are processed.
- It undertakes the marketing of tea on behalf of the farmers.

(Any 4 x 2 = 8 marks)

7. (a)

- Tea processing.
- Coffee processing.
- Milk processing.
- Sugar refining.
- Fruit canning.
- Brewing.
- Bakeries.
- Meat canning.

(Any 3 x 1 = 3 marks)

(b) (i) ***Proximity to Nairobi***

- Nairobi provides some inputs required by the industries in Thika.
- There is industrial interdependence among the industries in Nairobi and Thika.
- The rail and road connection between Nairobi and Thika provides easy movement of goods and services for the industries in Thika.

(Any 1 x 2 = 2 marks)

(ii) ***Availability of water***

- River Chania which passes through Thika town provides fresh water for industrial use especially for the coffee processing and fruit canning industries.
- Water for use in the industries is available throughout the year since river Chania is permanent.

(Any 1 x 2 = 2 marks)

(iii) ***The hinterland***

- Thika town has a rich agricultural hinterland which provides raw materials for the industries.
- The hinterland is densely populated hence provides cheap labour for the industries.

(Any 1 x 2 = 2 mark)

(c)

- Kenya exports industrial goods, thus earning foreign exchange which is then used to develop other sectors of the economy.
- It has created employment opportunities hence raising the standard of living of the people.
- It has led to the development of transport and communication networks thus facilitating the development of other sectors of the economy.
- It has facilitated the establishment of social amenities in the areas where industries are located.
- It has led to increased agricultural production since some industries use agricultural raw materials.
- It has led to the acquisition of management and technical skills which are also used in other sectors of the economy.

- It has led to the diversification of the economy thus reducing reliance on the agricultural sector.
- It has led to the improvement in the balance of trade since there is added value to the export products.
- It has led to the reduction of the importation of some industrial goods thus saving foreign exchange.
- It has led to the growth and expansion of settlements and urban centres as labour migrates to the industrial centres. ***(Any 4 x 2 = 8 marks)***

(d) (i)

- Nairobi.
- Mombasa.
- Thika. ***(Any 2 x 1 = 2 marks)***

(ii)

- The country has adequate capital to invest in the industry.
- Advanced technology and research has led to efficient methods of production of high quality cars which are competitive in the world market.
- Japan produces fuel-saving vehicles leading to a high demand for them in the world market.
- Japan has a highly skilled and industrious work force which enhances efficiency in production.
- Japan has many sea ports which makes the importation of raw materials and exportation of cars possible.
- The government policy/ peace and stability has encouraged Industrialization which has led to rapid development of industries.
- Japan has highly developed hydro-electric power projects which provide power needed for the industries.
- The presence of a large population with a high purchasing power provides a large local market for the cars.
- Japan's terrain is not suitable for development of agriculture and thus industries provide an alternative source of income to be used for buying food and other requirements.
- The strategic position of Japan in relation to other countries encourages trade thus promoting production of vehicles/Japan is accessible from all directions through the sea. ***(Any 3 x 2 = 6 marks)***

8. (a) (i) It is the science of planting, caring and using trees/forests and their associated resources. ***(2 marks)***

(ii)

- The area receives heavy rainfall/over 1000mm throughout the year, which encourages growth of trees.
- The area has deep fertile volcanic soils that allow the roots to penetrate deep into the ground to support the trees.
- The area has well drained soils thus there is no water logging which can choke plants and interfere with their growth.
- The area has moderate to cool temperatures which are ideal for the growth of a variety of trees.
- The area is a gazetted forest reserve hence settlement and cultivation are prohibited.
- The steep slopes discourage human activities thus enabling forests to thrive. ***(Any 3 x 2 = 6 marks)***

(iii)

- The government policy of degazettement has allowed encroachment of human activities.
- Increased population of elephants that destroy the trees.
- Illegal cultivation has led to clearing of parts of the forests.

(iii)

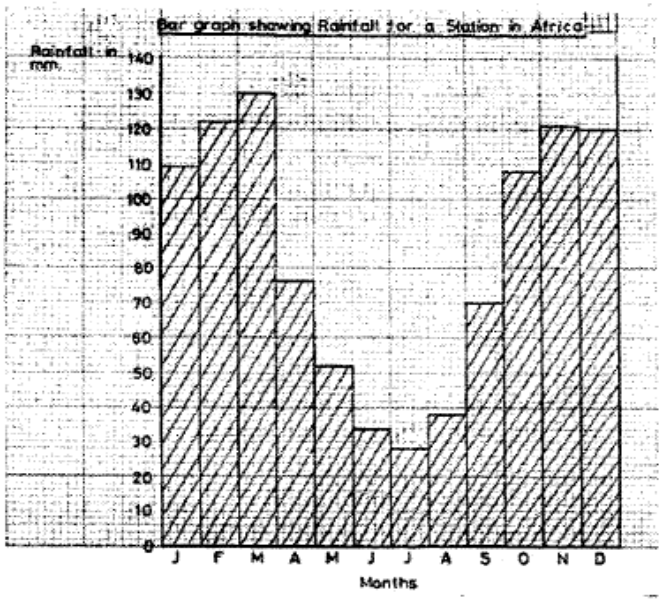
- ***Marble :*** Metamorphic rock.
- ***Sandstone:*** Sendimentary rock.
- ***Granite:*** Igneous rock. ***(3 marks)***

8. (a) (i) It is the average weather conditions of a place for a long period of time. ***(2 marks)***

(ii)

- Global warming/increased temperature may lead to increased evaporation of ocean water which may cause heavy rainfall in some areas.
- Increased temperature may lead to the melting of ice caps/ice sheets and glaciers leading to rising sea level.
- Increased temperature may lead to high evaporation causing drought.
- Climate change may cause changes in rainfall patterns in different parts of the world. ***(Any 2 x 2 = 4 marks)***

(b) (i)



(5 marks)

(ii)

- There is rain throughout the year/no dry month.
- The highest rainfall is received during the hot months/from October to March/ the lowest rainfall occurs during the coolest months/April to September.
- The wettest month is March with 130mm. The driest month is July with 28mm.
- The total annual rainfall is 1008mm. ***(Any 2 x 2 = 4 marks)***

(iii) 24 + 24 ---------248÷ 12 = 20.66°C ***(2 marks)***

(c) (i)

The hygrometer

- Taking the readings on the wet bulb thermometer.
- Taking the readings on the dry bulb thermometer.
- Working out the difference between the two readings.
- Interpreting the readings. ***(Any 3 x 1 = 3 marks)***

The rain gauge

- Remove the water collecting jar from the metal holder.

- Pour the water into the measuring cylinder.
- Take the readings on the measuring cylinder.
- Interpret the readings. ***(Any 3 x 1 = 3 marks)***

(ii)

- It can be used for making weather charts.
- The data can be used to plan for school activities.
- It can be used to plan for agricultural activities.
- It can be kept as a school record for future reference.
- It can be used to determine the type of uniform for the students.

(Any 2 x 1 = 2 marks)

9. (a)

- Crustal warping.
- Volcanic activity.
- Erosion.
- Deposition.
- Human/organic activity. ***(Any 3 x 1 = 3 marks)***

(b) (i)

- Earth movements led to crustal down warping.
- A shallow depression was created.
- The areas around the depression underwent uplifting.
- The uplifting reversed the direction of rivers such as R. Kagera.
- Water from the rivers and from rain eventually filled the depression.
- The resulting feature became a lake. ***(Any 4 x 1 = 4 marks)***

(ii)

- Evaporation from the Lake increases moisture in the atmosphere. This moisture condenses to form conventional rainfall.
- Evaporation from the Lake leads to high relative humidity in the area.
- The Lake encourages formation of lake breezes which have a cooling effect on the shores of the Lake.
- Regular land and lake breezes modify the temperatures, keeping the diurnal range low. ***(Any 3 x 2 = 6 marks)***

(c) (i)

- Lake Nakuru.
- Lake Elmentaita.
- Lake Bogoria. ***(Any 2 x 1 = 2 marks)***

(ii)

- The Lake lacks an outlet to the sea, thus mineral salts accumulate in its water.
- Presence of salt-bearing rocks on the lake bed leads to mineral salts dissolving in the water in the lake.
- The high temperatures in the area lead to high evaporation from the lake resulting in high concentration of mineral salts in the water.
- Mineral salts are deposited into the lake by surface run-off increasing the concentration of salts in the water.
- Underground seepage of the water that is rich in mineral salts adds to the salt in the lake. ***(Any 3 x 2 = 6 marks)***

(d)

- Lakes are scenic sites which promote tourism/recreation.
- They provide water for irrigation/domestic use/industrial use.
- They are reservoirs for water used for generating HEP.
- They are used for transport.
- They are used as fisheries.
- Some lakes have sand that is harvested for building and construction.

(Any 4 x 1 = 4 marks)

10. (a) (i) ***Weathering*** is the breaking down and decomposition of rocks at or near the earth's surface by physical or chemical processes while ***Mass Wasting*** is the displacement or movement of weathered materials downslope under the influence of gravity. ***(2 marks)***

(ii)

- Nature of the rock.
- Climate.
- Human activities/animals.
- Time.

(Any 3 x 1 = 3 marks)

(iii)

- As plants grow, their roots penetrate into rock cracks/joints causing them to widen and eventually the rock disintegrates.
- Plants absorb minerals from rocks and this weakens the rocks causing them to disintegrate.
- As plants rot on rocks, they release organic acids which then react with some minerals in the rocks leading to disintegration of the rocks.

(Any 2 x 2 = 4 marks)

(b) (i)

- Earth flows.
- Mud flows.
- Land slides.
- Rainwash/downwash.

(Any 2 x 1 = 2 marks)

(ii)

- Temperature change causes soil particles to expand and contract, hence they shift position downslope. Moisture/ rainwater causes soils to become wet and compact. On drying, the particles loosen and may shift from the original position down the slope.
- Human activities and the action of barrowing animals may cause the removal of soil on the lower part of a slope. This has a trigger effect on soil particles on the upper part of a slope which may then shift downslope.
- Freezing of soil water expands the spaces between soil particles. Once the water thaws, the particles fall by gravity and may shift position downslope.
- Moisture acts as lubricant to soil particles causing their movement downslope.
- External forces such as moving vehicles and earth tremors have a trigger effect which causes downward movement of soil particles.

(Any 3 x 2 = 6 marks)

(c)

- Mass wasting leads to formation of derelict land. As a result scars are left on the landscape when rock materials break away from a hillside. This spoils the beauty of the land.
- As the materials move over the land they facilitate the loosening of the top soil thus increasing soil erosion.
- Materials from a landslide may create a barrier across a river valley thus leading to eventual formation of a lake.
- Landslides may cause rivers to change their causes reducing the volume of water downstream.
- Mass movement/landslides causes damage to property when materials cover structures such as roads, farms or homes. This obstructs normal life.
- Some form of mass movement lead to loss of life when people/animals are buried under large quantities of rock waste.
- Mass movement may create sceneries that may become tourist attractions.

(Any 4 x 2 = 8 marks)

(c)

- Most of the existing rail lines were constructed by the colonialists who had no interest in linking the colonies.
- The rail lines are of different gauges making it difficult for the countries to link them.
- Political differences/political instability discourages attempts to link the lines.
- Inadequate capital limits the construction of new lines and maintenance of railways.
- Large areas of the continents are economically unproductive thus it would be uneconomical to link them by railway.
- Difficult terrain/thick forests makes it expensive to construct rail lines.
- Limited trade links due to production of similar commodities does not justify construction of rail lines. ***(Any 3 x 2 = 6 marks)***

(d)

- Some rivers have rapids/water falls/cataracts.
- Some rivers have seasonal regime/varying volume.
- Some rivers have shallow water/silted river mouths.
- Some have floating vegetation that choke the courses.
- Some rivers have narrow channels unsuitable for sailing vessels.

(Any 4 x 1 = 4 marks)

10. (a) (i)

- Oil leaks from ships/ trucks.
- Industrial effluents when discharged into rivers/ lakes.
- Washing away (into rivers and lakes) chemicals/ fertilizers/ pesticides/ insecticides.
- Dumping of solid waste into water courses.
- Washing/bathing/watering animals in rivers/lakes.
- Disposing of raw sewerage into rivers/lakes. ***(Any 2 x 1 = 2 marks)***

(ii)

- If may cause death of aquatic life.
- It destroys beaches.
- It leads to spread of water-borne diseases. ***(Any 2 x 1 = 2 marks)***

(b)

- Dykes are constructed on raised banks/levees of rivers to increase their height in order to prevent water from overflowing.
- Dredging of river channels to deepen and widen them to make it possible for them to accommodate excess water.
- Dams are built across the rivers to control the amount of water discharged downstream.
- Training/re-directing a river/Straightening of a river to control its wild flow.
- Planting of trees in the catchment area to reduce surface run off and increase infiltration.
- Diverting tributaries to other rivers to reduce the volume of the main river.

(Any 4 x 2 = 8 marks)

(c) (i) ***Contour farming***: It helps to trap water, thus preventing the formation of gullies and removal of top soil from a slope. ***(2 marks)***

(iii) ***Mulching:*** The mulch adds humus in the soil as it decomposes thus enriching the soil. It enhances the retention of water in the soil by preventing it from direct sunlight/ wind. It increases the rate of infiltration by holding the rain water and releasing it gradually. It controls/stops run-off/speed of surface run-off by acting as a cover to the soil. ***(Any 1 x 2 = 2 marks)***

(iii) ***Crop rotation:*** Since different crops utilize different minerals, rotation helps in balancing/ replacing the mineral content in the soil. ***(2 marks)***

(d) (i)

- To get permission from the relevant authority
- To be able to formulate the objectives.
- To familiarize with the area of study.
- To be able to prepare a working schedule/decide on the appropriate methods of data collection.
- To determine the respondents/resource persons. ***(Any 3 x 1 = 3 marks)***

(ii)

- Interviewing.
- Taking photographs.
- Observation.
- Measuring the extent of polluted area.
- Administering questionnaires.
- Tape recording. ***(Any 2 x 1 = 2 marks)***

(iii)

- Analysing the data.
- Writing a report.
- Giving relevant advice to the stake holders. ***(Any 2 x 1 = 2 marks)***