312/2
GEOGRAPHY
Paper 2
JUNE 2022
Time: 2¾ hours

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KASSU JET JOINT EXAMINATION
Kenya Certificate of Secondary Education
312/2
Paper 2
GEOGRAPHY

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MARKING SCHEME

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SECTION A
*Answer **all** the questions in this section.*

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1. (a) **Define   forestry**   **(2 marks)**

- *This is the science of developing/cultivating of forests*

(b) State three problems facing forestry in Kenya   **(3 marks)**

- *Forest fires destroy large tracts of forests*
- *Encroachment into forest land to create room for agriculture & settlement*
- *Overexploitation due to higher rate of exploitation than being replaced*
- *Poor harvesting methods & management of forests like indiscriminate cutting & illegal logging*
- *Degazettment of forest reserves has led to reduction of forest cover*
- *Prolonged droughts have led to shrinking of forests*
- *Attack by pests and diseases like aphids has destroyed the forests with exotic trees*
- *Destruction of forests by huge animals like elephants which trample and damage the trees*

2(a) Apart from irrigation identify two other methods of reclaiming land in Kenya

- *Draining of swamps and flood areas*
- *Control of pests*
- *Introduction/Planting of drought resistant crops*
- *Control of soil erosion*
- *Improvement of soil/application of manures/fertilizers*

- *Afforestation / agroforestry*

(Any 2 x 1=2 marks)

b) State three advantages of sprinkler irrigation method   (3 marks)

- *Water is evenly distributed*
- *Less water shortage*
- *Sprinklers can be moved*
- *Amount of water is regulated*
- *Soluble fertilizers can be applied with the water*
- *Most of the water infiltrates the soil*

(Any 3x1=3mks)

3(a) Give two reasons why pastoralists keep large herds of animals.   (2 marks)

- *Is a sign of wealth*
- *Payment of dowry*
- *An insurance against death*
- *The animals are a source of food-meat and milk*
- *The animals when sold is a source of money*
- *The hides/skins are used for clothing*

(Any 2 x 1 = 2mks)

b) State three physical factors that favour dairy farming in the Kenya highlands
(2 marks)

- *Gently sloping landscape for easy movement*
- *Cool climatic conditions ideal for exotic dairy cattle*
- *Availability of continuous growth quality pasture throughout the year*
- *High rainfall received throughout the year supports the growth of pasture*
- *Availability of water from rivers/streams and reservoirs for watering the animals*
- *Availability of large tracts of land for establishment of dairy farms*

(Any 3 x 1 = 3 marks)

4(a) Name two forms of wildlife in East Africa `   (2 marks)

- *Wild animals*
- *Vegetation-forests, grasslands*
- *Birds*

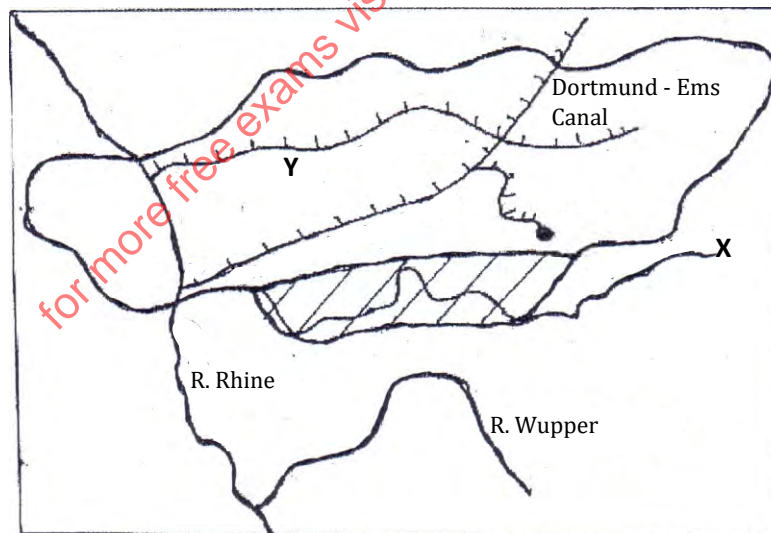- *Insects*
- *Aquatic life eg fish*

b) State three reasons why wildlife should be conserved.   (3 marks)

- *For protection of endangered species*
- *For proper utilization of marginal areas*
- *Contribute to diversification of the economy*
- *Promote tourism which is a source of foreign exchange*
- *The game parks are good for learning hence promote education and research*
- *Promote/create employment opportunities through KWS*
- *Creation of game parks has led to development of roads opening especially remote areas*
- *Provision of food especially from privately owned parks*
- *By protecting forests this promotes lumbering industries*
- *Protection of forests also creates a scenic beauty for aesthetic value*
- *For modification of climate*
- *For provision of medicine since some plants have medicinal value*

(Any 3x1=3mks)

5) Study the map of the Ruhr industrial region and use it to answer the questions that follow.

(i)   Name the River marked X.   (1 mark)

- *Ruhr river*

(ii) **Name the Canal marked Y.** (1 mark)

- *Lippe canal*

(iii) **Apart from iron and steel industries, name *one* other industries in the Ruhr region.** (1 marks)

- *Petro-chemical industries*
- *Textile industries*
- *Oil refining*
- *Electronics industries*
- *Food processing*
- *Cutlery and surgical industries*
- *Engineering industries*

(b) State two characteristics of Jua Kali industries in Kenya (2 marks)

- *Mostly operated in the open/sheds,*
- *They use simple equipment,*
- *Use locally available / recycled raw materials,*
- *Use simple / basic skills in craft,*
- *Operated by individuals / small groups,*
- *Pursued as part time or full-time occupation,*
- *Require low capital investment,*
- *They are widespread.*

SECTION B

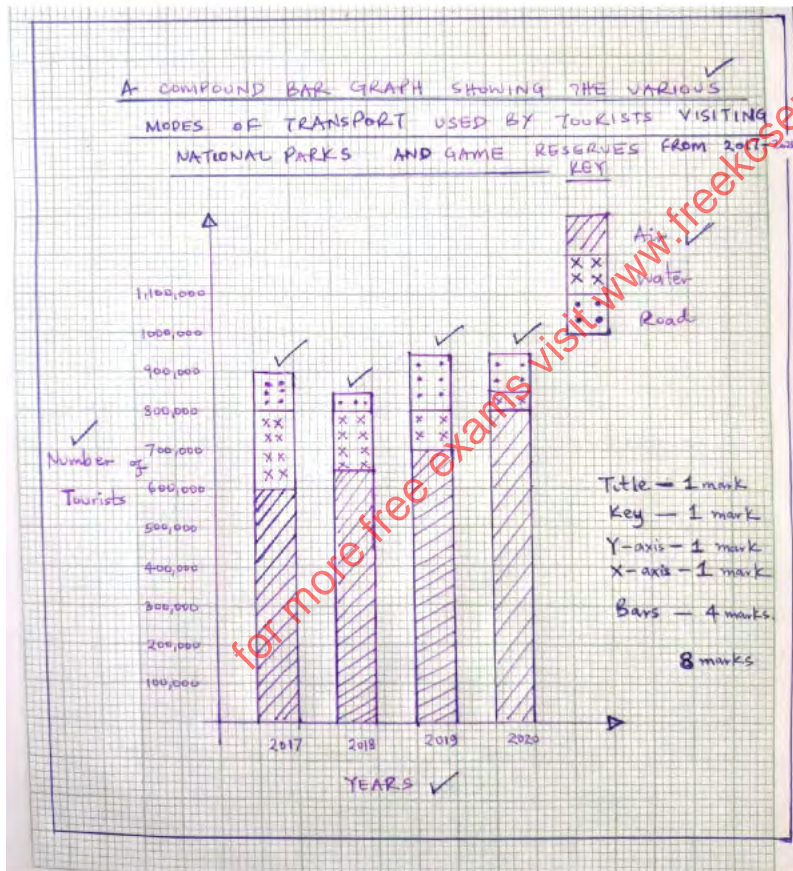### Answer question 6 and any other two questions in this section.

6. The table below shows various modes of transport used by domestic tourists visiting national parks and game reserves in Kenya between the years 2017 and 2020. Use it to answer the following questions.

Mode of transport	2017	CT	2018	CT	2019	CT	2020	CT
Road	100000	**100000**	50000	**50000**	150000	**150000**	100000	**100000**
Air	600000	**700000**	650000	**700000**	700000	**850000**	800000	**900000**
Water	200000	**900000**	150000	**850000**	100000	**950000**	50000	**950000**

(a) (i) Calculate the percentage increase in the number of tourists between 2019 and 2020 who used air transport (2marks)

- *2019 = 700000*
- *2020 = 800000*
- *The difference in the number of tourists = (800000 – 700000) =100000*
  Percentage increase = 100000/700000× 100%
  = *14.286 %*

(ii) Using a vertical scale of 1 cm to represent 100000 tourists, draw a compound bar graph to represent the above data (8 marks)

(iii) List two disadvantages of using compound bar graph to represent statistical data (2marks)

- *It takes a lot of time to draw due to the many calculations involved*
- *The values of individual components are difficult to establish/interpret at a glance*
- *It is used to represent a limited number of components on a single bar*

- *Values of many variables are placed together on one bar giving a wrong impression*

(b) (i) Define the term eco-tourism (2marks)

- *Visiting places of interest combined with the conservation of the environment*

(ii) Name three tourist attraction found in the rift valley region of Kenya (3marks)

- *Varied relief features*
- *Wild animals*
- *Birds/flamingos*
- *Hot springs/geysers/fumaroles/geothermal*
- *Vegetation*
- *Peoples culture*
- *Pre-historic sites/historical sites*
- *Mining sites*
- *Sports tourism*

(c) Explain four measures that the county governments in Kenya should take in order to attract more tourists (8marks)

- *Develop roads/air/water transport to all tourist sites in order to increase accessibility to most tourist sites*
- *Improve on security to guarantee safety*
- *Market the counties aggressively as tourist destinations in order to attract more tourists*
- *Establish a diversify tourist attraction to avoid depending on the traditional attractions thus reducing competition with other tourist destinations*
- *Establish tourist facilities in many parts of the country where tourist potentials exist in order to promote tourism*

7 a) i) What is mining? (2marks)

- *The extraction of valuable minerals occurring on /below the earth's surface*

i) Give three formations in which mineral ores occur (3marks)

- *Some occur in veins and lodes*
- *Some occur in seams and beds*
- *Some occur as weathered products*
- *Some occur as alluvial deposits*

b) Explain how the following factors influence the exploitation of minerals

i) Size of Mineral Deposit/ Amount of Mineral *(2marks)*

- *Presence of larger deposits encourages the exploitation of minerals seeing as they are more likely to produce profit.*
- *Presence of small quantities of minerals discourages mining although small mineral deposits may be mined if the mineral is in high demand or in the case that costs are lower than profits.*

ii)   *Level of Technology*   **(4 marks)**
- *Advanced technology enhances mining using a deep mining method enabling enhanced mining of minerals.*
- *Less sophisticated technology is mainly used for alluvial and surface-based mining*
- *Technology is important in prospecting for and mining of minerals*
- *Developing countries have low levels of technology hindering mining*

c) Describe the dredging mining method   **(4 marks)**
- *A dredger floats on the lake/ponds*
- *It's a mechanical shovel that cuts through the crust of minerals on the surface of the lake scooping the large chunks of the mineral*
- *The large chunks of the scooped minerals are placed on the conveyer belt and sent into a crusher*
- *The crushed minerals are then mixed with water from the lake*
- *Liquor is then added and pumped to the shore to the processing plant*

d) i) State three uses of soda ash   **(3 marks)**

- *It's a raw material for making glass*
- *It is used in making detergents*
- *It is used in some chemical industries/petroleum refining*
- *It is used as a water softener/water treatment*
- *It is used in desulphurising steel*
- *It is used in textile industries*

ii)   **Describe how diamond is processed in South Africa**
- *Diamond bearing kimberlite is crushed*
- *Crushed rock is mixed with water*
- *Diamond sinks to the bottom as it's denser*
- *Water and less dense residue are drained off*
- *Remaining material is put on heavily greased trays and washed*
- *Diamond repels water so it sticks to grease while remnants are drained off*
- *Diamonds are then sorted out and graded into gem diamonds and industrial type (for cutting purposes).*

e). Explain four ways in which gold mining has contributed to the economy of South Africa **(8 marks)**

- *Gold id highly priced, thus earning the country foreign exchange which is used to develop other sectors of the economy*
- *Gold mining is a source of employment which raises the living standards of the people*
- *Gold is a raw material for jewellery industries promoting industrial expansion*
- *Gold is a medium of exchange in the world and South Africa uses it as a way of paying debt*
- *Gold mining has led to the development of industrial mining that is useful to other sectors of the economy*
- *Gold mining has led to development of infrastructure such as transport which has enabled faster and cheaper means of transporting goods*
- *Gold mining has led to the development of towns by enhancing a provision of social amenities*

8. (a) (i)   What is out grower farming? **(2 marks)**

- *A small scale farming assisted by the nearby processing factory or estate to grow a crop that the factory uses as a raw material in the agro processing.*

(ii) Identify four characteristics of plantation farming. **(4 marks)**

- *Farms are large in size*
- *Farming is capital intensive*
- *Farms are owned by individuals/groups/companies*
- *Farms are scientifically managed*
- *One single crop is grown /monoculture is practiced*
- *Farming activities are highly mechanized*
- *Farms are labour intensive*
- *Production is high per unit area*

(b)   Give five physical factors that influence the growing of sugar cane in Kenya **(5 marks)**

- *High temperature throughout the year*
- *High rainfall throughout the year*
- *Well-distributed rainfall annually*
- *A dry sunny period for ripening and harvesting*
- *Gently sloping land*
- *Deep soils*
- *Well-drained soils*
- *Clay/black cotton soils.*

c) **Describe the stages involved in processing of sugarcane at the factory.**

- *At the factory the cane is weighed*
- *The cane is washed to remove soil/mud*
- *The cane is cut into small pieces by rotating knives*
- *The cane pieces are crushed/pressed by heavy rollers to produce juice*
- *The juice is filtered to remove impurities*
- *Addition of lime is done to reduce acidity in the juice*
- *The juice is boiled to evaporate water forming thick brown syrup*
- *The syrup is stirred for crystals to form*
- *The crystals are separated from the molasses*
- *The crystals are refined by bleaching to form white sugar*
- *The crystals are heated, dried and cooled*
- *Grading, weighing and packing ready for sale*

d) **Explain four challenges facing sugar farming in Kenya   (8 marks)**

- *Fire outbreak destroying the cane causing losses to the farmers*
- *High cost of farm inputs lowering the farmer's income*
- *Pests such as termites, white scales destroying the quality and lowering the yields of cane*
- *Diseases such as ratooning stunting, smut, mosaic and yellow wilt destroying the quality and lowing the yields*
- *Mismanagement of sugar factories lead to delayed payments to the farmers discouraging farmers*
- *Competition from cheap imported sugar lowering the prices hence low profits to the farmers*
- *Poor feeder roads delaying delivery of cane to the factory lowing the quality of the cane*
- *Drought delaying maturing of sugar cane which lower the quality and production*
- *Poor seeds or setts planted leads to poor harvest which lowers profits.*

9. a i) Name two types of fishing   (2 marks)
- *Pelagic*
- *Demersal*
- *Fresh water*
- *Inshore*

ii) State three reasons why marine fisheries are under developed in Kenya. (3marks)

- *The continental shelf is narrow*
- *The coastline is fairly straight and has few indentations*
- *The waters are relatively warm for the growth of planktons*
- *The fishermen have inadequate capital to purchase modern fishing equipment*
- *Fishermen have inadequate skills*
- *There is low demand for marine fish locally*
- *There is limited market due to competitors from the developed countries*

iii) Provide four solutions to the problems facing the fishing industry in Kenya.

(4 marks)

- *The government should encourage the development of cooperatives to enable the fishermen to market their fish*
- *Roads leading to the freshwater lake should be developed to enable to enable fish to reach the market fast*
- *The government and local financial institutions should make funds available for fishermen through offering loans to assist them purchase fishing equipment*
- *Legislation against dumping should be enforced so that pollution of fisheries can be reduced/treatment of industrial effluents before releasing them into the rivers and lakes*
- *Licensing of fishermen by the government can assist in monitoring the number of fishermen hence reducing overfishing*
- *Banning of fish trawlers in the lakes and use of standardized nets to ensure only mature fish is caught.*

b i) Give two methods of fish preservation. **(2 marks)**

- *Smoking*
- *Use of honey*
- *Canning*
- *Frying*
- *Salting*
- *Sun drying*
- *Refrigeration*

ii) Describe the basket method of fishing. **(5 marks)**

- *The basket is funnel shaped to allow entry for fish*
- *The basket is lowered in water with the mouth facing downstream in a river. In a lake the basket is placed facing any direction*
- *At the mouth of the basket there is a valve which restricts the outward movement or escape of fish once inside the basket*
- *The basket is held in place by ropes /stones/sticks to prevent it from being swept downstream*
- *It is left in the water for some time after which the fish are removed*

c) i) Name three countries in the North West Atlantic fishing ground. (3marks)

- *Mexico*
- *USA*
- *Canada*

ii) Compare fishing in Kenya and Japan under the following subheadings

- **Continental shelf** (2 marks)

Kenya has a deep and narrow continental shelf discouraging the growth of planktons while Japan has broad shallow and extensive continental shelf favoring the growth of planktons

- **Coastline** (2marks)

Kenya has an almost straight/regular coastline discouraging the breeding of fish while Japan has an irregular/indented coastline encouraging the breeding of fish

- **Currents** (2marks)

Kenya experiences warm waters because of the warm Mozambique current thereby discouraging the survival of fish while Japan experiences cool waters caused by the meeting of cold Oya Siwo and warm Kuro Siwo currents that is ideal for the survival of fish.

10. (a) (i) Define retail trade (2marks)

- *This is the buying of goods from wholesalers and selling to the final consumer at a profit.*

(ii) Name three major imports from Europe to Kenya (3marks)

- *Machinery*
- *Capital equipment*
- *Pharmaceutical products/medicine*
- *Fertilizers*
- *Automobiles*

(b) State four factors that influence internal trade in Kenya (4marks)

- *Population size: This determines the demand of goods produced leading to expansion of trade.*
- *Cultural differences: This leads to specialization in production of goods for exchange.*
- *Production of similar goods for trade by different regions: This limits market potential while production of different goods enhances trade between communities in the country.*

- *Level of development of transport network: A well-developed transport network enhances trade as goods can be transported to far away markets while a poor transport network limits trade as market potential is restricted.*
- *Level of income or purchasing power: Low purchasing power of most Kenyans limits trade as market potential is restricted.*
- *Security: This encourages expansion of trading activities while insecurity discourages trade in some regions.*

(c) Explain four ways through which Kenya will benefit from the renewed East Africa   Co-operation   (8 marks)
- *Improved access to raw materials for industrial use.*
- *Expanded markets and new investments from local and foreign sources leading to expansion of industries with more earnings.*
- *Exchange of research findings and training which help in economic development.*
- *Improved transport links between Kenya, Uganda and Tanzania for faster movement of goods and people.*
- *Increased employment opportunities because of free movement of people within the region and expanded trade industry.*
- *Increased number of tourists visiting Kenya as a result of opening border points which is a source of revenue and increased volume of trade.*

(d) Explain four significance of trade to Kenya   (8marks)
- *Many Kenyans are employed in domestic trade such as in wholesale and retail shops and sectors dealing with foreign trade (customs).*
- *It's a source of revenue for the government by charging sales tax such as V.A.T on manufactured goods sold locally and tariffs at the point of entry into the country.*
- *Foreign trade enables the country to earn foreign exchange which is used to import goods the country needs.*
- *Leads to development of settlements as people move to where trading activities are carried out.*
- *International trade ensures availability of a wide range of goods for consumers to select from in order to satisfy their needs.*
- *It leads to development of industries as demand for goods increases hence more industries are set up or existing ones increase their activities so as to satisfy the increase in demand.*
- *Leads to development and improvement of transport infrastructure such as roads and railways in order to enhance transportation of goods and people.*
- *Trade enhances specialization leading to production of high-quality goods for trade which enables the country to earn higher income.*
- *Trade enhances economic cooperation between Kenya and the trading partners which creates better international cooperation.*
- *Trade leads to diversification of the economy hence increasing local and foreign investments.*