

THE KENYA NATIONAL EXAMINATIONS COUNCIL
Kenya Certificate of Secondary Education

312/1

Paper I

GEOGRAPHY

Dec. 2022 – 2 $\frac{3}{4}$ hours



Name **Index Number**

Candidate's Signature **Date**

Instructions to candidates

- (a) Write your name and index number in the spaces provided above.
- (b) Sign and write the date of examination in the spaces provided above.
- (c) This paper consists of **two** sections; **A** and **B**.
- (d) Answer **all** the questions in section **A**.
- (e) Answer **question 6** and any other **two** questions from section **B**.
- (f) Answers **must** be written in the spaces provided at the end of question 10.
- (g) **This paper consists of 20 printed pages.**
- (h) **Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.**
- (i) **Candidates should answer the questions in English.**

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Section	Questions	Maximum Score	Candidate's Score
A	1–5	25	
B	6	25	
		25	
		25	
Total Score			

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SECTION A

Answer all the questions in this section.

1. (a) Give the forces which have contributed to the geoid shape of the Earth. (3 marks)
- (b) Name the minerals that make up the core of the Earth. (2 marks)

2. (a) List **two** examples of extrusive igneous rocks. (2 marks)
- (b) Give **three** characteristics of sedimentary rocks. (3 marks)

3. (a) Apart from aspect, list **three** other factors that influence the distribution of natural vegetation. (3 marks)
- (b) State **two** ways through which aspect influences the distribution of natural vegetation. (2 marks)

4. (a) What is a mineral? (2 marks)
- (b) Classify each of the following rocks according to their formation:
 - (i) Marble
 - (ii) Granite
 - (iii) Mudstone(3 marks)

5. (a) Differentiate soil profile from soil catena. (2 marks)
- (b) State **three** ways in which soil texture is important. (3 marks)



SECTION B

Answer question 6 and any other two questions from this section.

- 6.** Study the map of Kisumu East 1:50,000 (sheet 116/2) provided and answer the following questions.
- (a) (i) Give the longitudinal extent of the area covered by the map. (1 mark)
- (ii) Name **three** human made features in the grid square 0193. (3 marks)
- (iii) Identify the **two** methods used to show relief on the map. (2 marks)
- (iv) Calculate the area of Kisumu town. Give your answer in square kilometres. (2 marks)
- (v) Name **two** types of natural vegetation found in the area covered by the map. (2 marks)
- (b) Draw a square 10 cm by 10 cm to represent the area enclosed by Eastings 00 and 10, and Northings 80 and 90. (1 mark)
- On it mark and name the following:
- (i) All weather road bound surface (1 mark)
- (ii) River Ombeyi (1 mark)
- (iii) Chiga market (1 mark)
- (iv) Air photo principal point (04) (1 mark)
- (c) Describe the distribution of settlement in the area covered by the map. (4 marks)
- (d) Citing evidence, give **three** economic activities carried out in the area covered by the map. (6 marks)
- 7.** (a) What is faulting? (2 marks)
- (b) (i) Apart from the Rift Valley, name **three** other features that result from faulting. (3 marks)
- (ii) With the aid of well labelled diagrams, describe how the Rift Valley may be formed by compressional forces. (8 marks)
- (c) Explain how faulting influences each of the following:
- (i) drainage (6 marks)
- (ii) transport (6 marks)

8. (a) (i) Name the instruments used to measure each of the following elements of weather:
- I. Humidity (1 mark)
- II. Atmospheric pressure (1 mark)
- (ii) State **three** traditional methods of weather forecasting. (3 marks)
- (b) The statistical table below shows temperature and rainfall for a given station X in Africa. Use it to answer questions (b) (i) and (ii).

Month	J	F	M	A	M	J	J	A	S	O	N	D
Temperature (°C)	27	27	26	25	23	22	21	21	22	23	25	26
Rainfall (mm)	366	376	452	399	264	282	302	203	132	99	117	262

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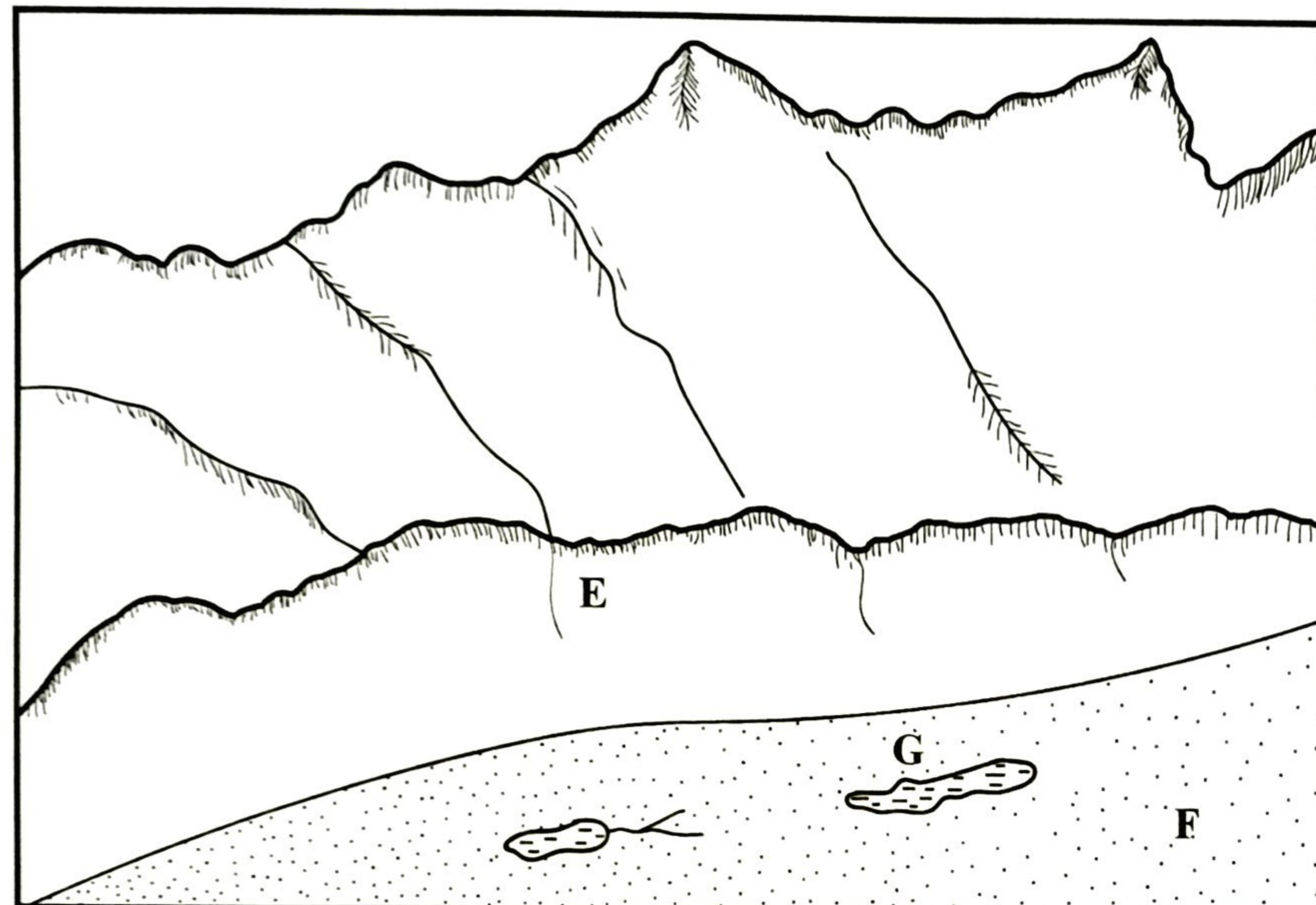
- (i) Calculate the:
- I. annual range of temperature (2 marks)
- II. total annual rainfall (2 marks)
- (ii) Describe the climatic conditions of station X. (4 marks)
- (c) Explain how ocean currents influence the climate of adjacent coastal land. (6 marks)
- (d) Explain **three** measures that can be taken to control desertification. (6 marks)

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9. (a) Apart from landslides, list the other **two** forms of rapid mass wasting. (2 marks)
- (b) Explain how each of the following factors facilitate mass wasting:
- (i) Nature of rock material (4 marks)
- (ii) Human activities (4 marks)
- (c) Explain the effects of mass wasting on the environment. (8 marks)
- (d) You intend to carry out a field study in an area affected by landslides within the vicinity.
- (i) Give **three** reasons why it is important to seek permission from the school administration. (3 marks)
- (ii) State the advantages of studying landslides through fieldwork. (4 marks)



10. (a) (i) Name **two** mountains in East Africa that are ice capped. (2 marks)
- (ii) Give **two** types of moraine. (2 marks)
- (b) The diagram below represents an upland glaciated landscape. Use it to answer question 10(b)(i).



- (i) Name the features marked **E**, **F** and **G**. (3 marks)
- (ii) Describe how each of the following features is formed:
- Pyramidal peak (6 marks)
 - Crag and tail (6 marks)
- (c) Explain the significance of glaciated upland areas to human activities. (6 marks)

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B	6	25	
		25	
		25	
Total Score		100	



SECTION A

Answer all the questions in this section.

1. (a) State **three** conditions that are necessary for the formation of petroleum. (3 marks)
(b) Give **two** by-products of petroleum. (2 marks)

2. (a) Define Agriculture. (2 marks)
(b) Give **three** social factors which influence agriculture. (3 marks)

3. (a) Apart from draining of swamps, give **three** other methods through which land has been reclaimed in Kenya. (3 marks)
(b) Identify **two** methods that are used to drain swamps in Kenya. (2 marks)

4. State **four** ways in which bush fires negatively affect wildlife in East Africa. (4 marks)

5. (a) Give **three** factors that favour the establishment of National Parks in the semi-arid areas of Kenya. (3 marks)
(b) State ways in which ecotourism has led to sustainable tourism industry in Kenya. (3 marks)

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SECTION B

Answer question 6 and any other two questions from this section.

- 6.** The sales (in tonnes) of selected crops grown in Kenya between 2015 and 2017 are represented in the table below. Use it to answer questions (a) and (b) (i).

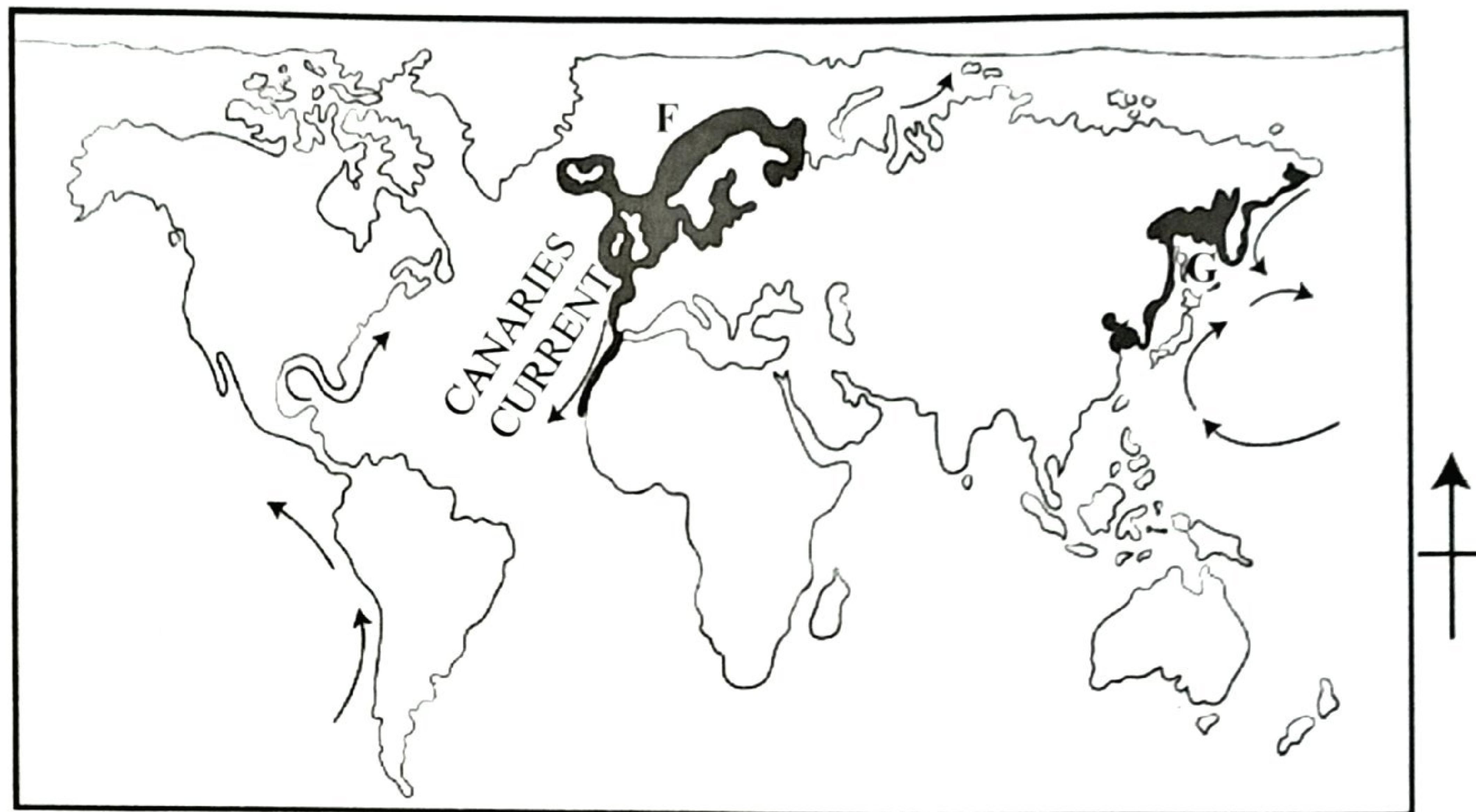
CROP	2015	2016	2017	TOTAL
TEA	399,200	473,000	439,900	1,312,100
MAIZE	295,300	265,800	239,200	800,300
WHEAT	227,300	215,900	156,900	600,100

Source: Economic Survey 2018

- (a) (i) Calculate the percentage decrease in sales of wheat between the years 2015 and 2017. (2 marks)
- (ii) Give **four** reasons that may have led to the decrease in wheat sales between 2015 and 2017. (4 marks)
- (b) (i) Draw a pie chart to represent the data on selected crops sales shown on the table above. Show your calculations. (7 marks)
- (ii) Give **three** advantages of using a pie chart to represent geographical data. (3 marks)
- (c) (i) Name **three** counties in Kenya where wheat is grown on large scale. (3 marks)
- (ii) Explain **three** physical conditions that favour wheat growing in Kenya. (6 marks)



7. (a) Name **two** categories of inland fresh water fisheries in East Africa. (2 marks)
- (b) The map below shows some major fishing grounds of the world.
Use it to answer questions 7(b) (i) and (ii).



- (i) Identify the shaded fishing grounds marked **F** and **G**. (2 marks)
- (ii) Explain **three** physical conditions that favour fishing in the ground marked **G**. (6 marks)
- (c) (i) Name **two** fishing methods used in small scale fishing in Kenya. (2 marks)
- (ii) Describe how the trawling method is used in fishing. (5 marks)
- (d) Explain **four** ways in which fresh water fisheries are conserved in Kenya. (8 marks)

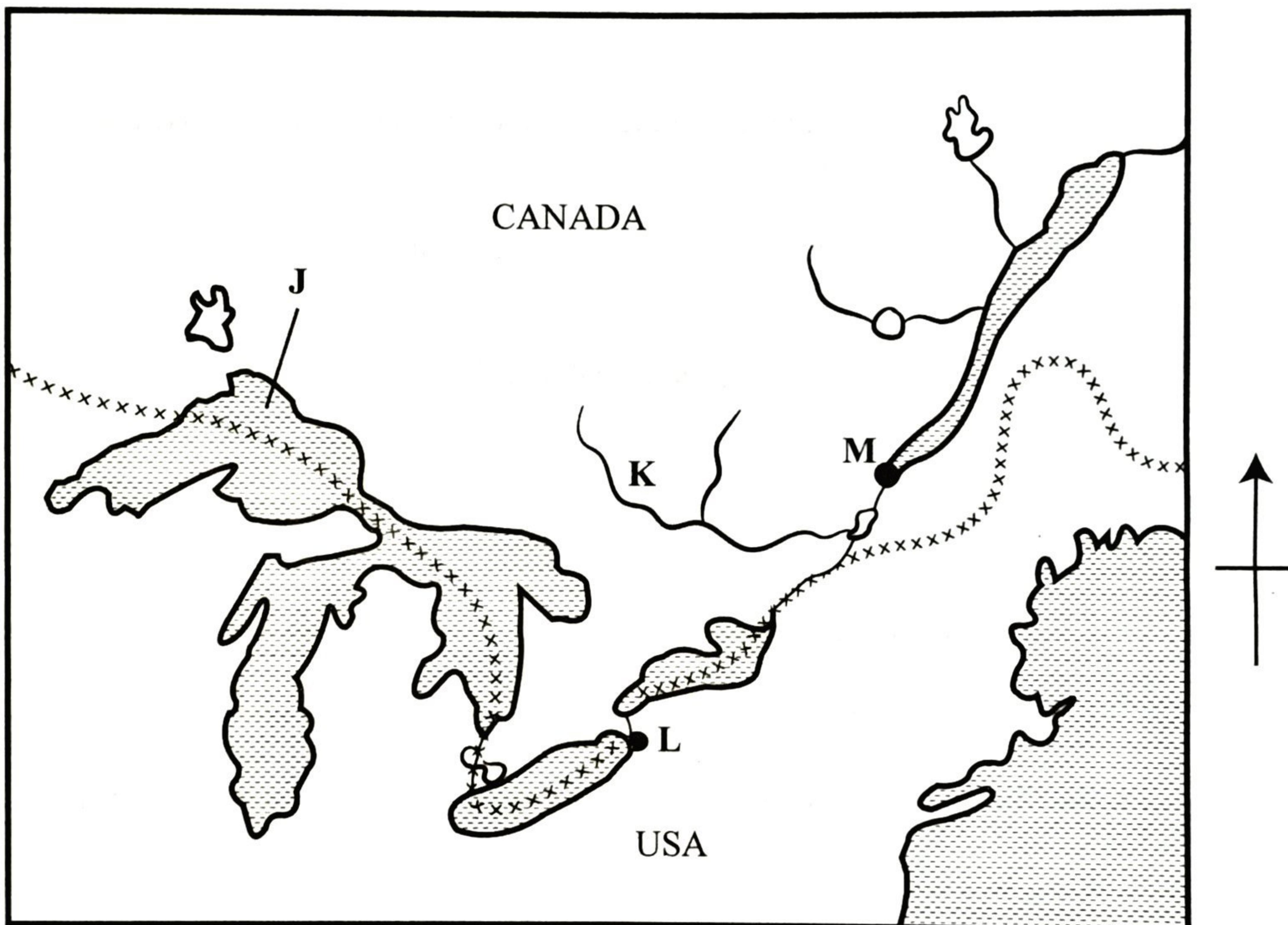


8. (a) (i) Identify **three** renewable sources of energy. (3 marks)
- (ii) State **five** disadvantages of using coal as a form of energy. (5 marks)
- (b) (i) What is energy crisis? (2 marks)
- (ii) Explain **four** ways in which energy crisis affects the economy of Kenya. (8 marks)
- (c) Some students carried out a field study on uses of energy by sampling the households around their school.
- (i) State **three** reasons why the students would be divided into groups. (3 marks)
- (ii) Identify **two** sampling techniques that the students may have used during the field study. (2 marks)
- (iii) Give **two** advantages of sampling the households for the study. (2 marks)
9. (a) (i) Give **three** examples of agricultural non-food processing industries in Kenya. (3 marks)
- (ii) State **five** ways in which government policy influences location of industries in Kenya. (5 marks)
- (b) (i) Give **five** characteristics of the cottage industry in India. (5 marks)
- (ii) Explain **three** problems facing *Jua Kali* industries in Kenya. (6 marks)
- (c) You intend to carry out a field study in an industry within the local environment.
- (i) Give **two** sources of secondary data you will refer to before conducting the field study. (2 marks)
- (ii) Identify **four** benefits of the industry to the local community that you are likely to find out during the study. (4 marks)



10. (a) (i) What is transport? (2 marks)
- (ii) Name **two** international airports in Kenya. (2 marks)
- (iii) Give **four** advantages of air transport over road transport. (4 marks)
- (b) State **five** benefits that would result from improving the conditions of roads in rural areas of Kenya. (5 marks)

The sketch map below shows the Great Lakes and the St. Lawrence Seaway. Use it to answer question (c).



- (c) Name:
- the lake marked **J**. (1 mark)
 - the river marked **K**. (1 mark)
 - the ports marked **L** and **M**. (2 marks)
- (d) Explain **four** ways in which the Great Lakes and the St. Lawrence Seaway has contributed to the economies of United States of America and Canada. (8 marks)



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