THE KENYA NATIONAL EXAMINATIONS COUNCIL
Kenya Certificate of Secondary Education

312/1 **Paper 1**

GEOGRAPHY

Dec. 2022 – 2¾ hours

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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)

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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)

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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)

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:

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(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)

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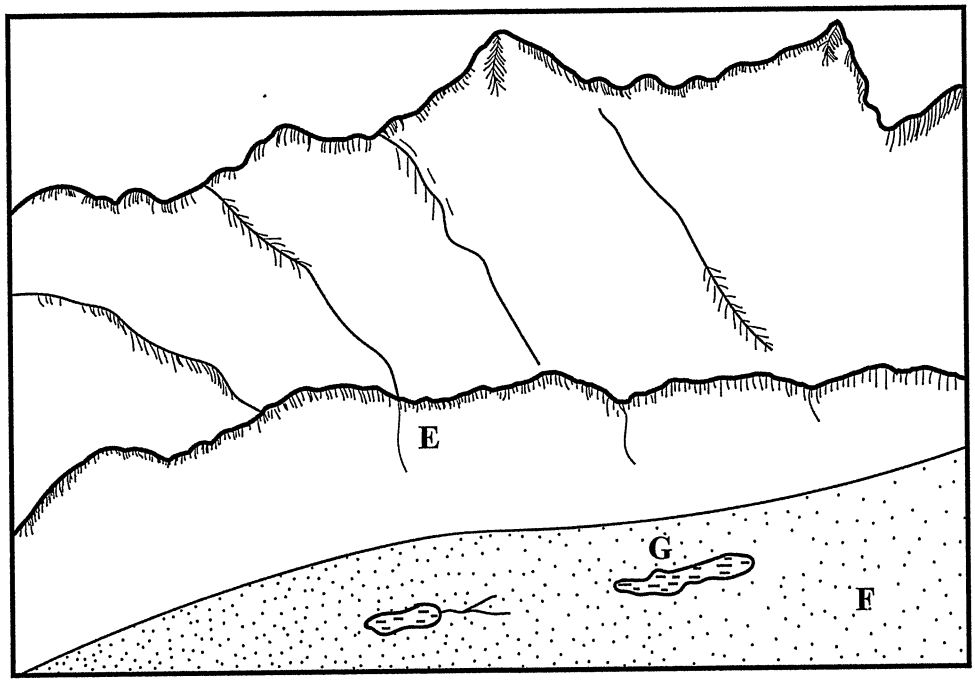
10. (a) (i) Name **two** mountains in East Africa that are ice capped. (2 marks)

(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:

I. Pyramidal peak (6 marks)

II. Crag and tail (6 marks)

(c) Explain the significance of glaciated upland areas to human activities. (6 marks)

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