312/1
GEOGRAPHY
Paper 1
September 2021
Time: 2¾ hours

KASU JET JOINT EXAMINATION
Kenya Certificate of Secondary Education
312/1
GEOGRAPHY

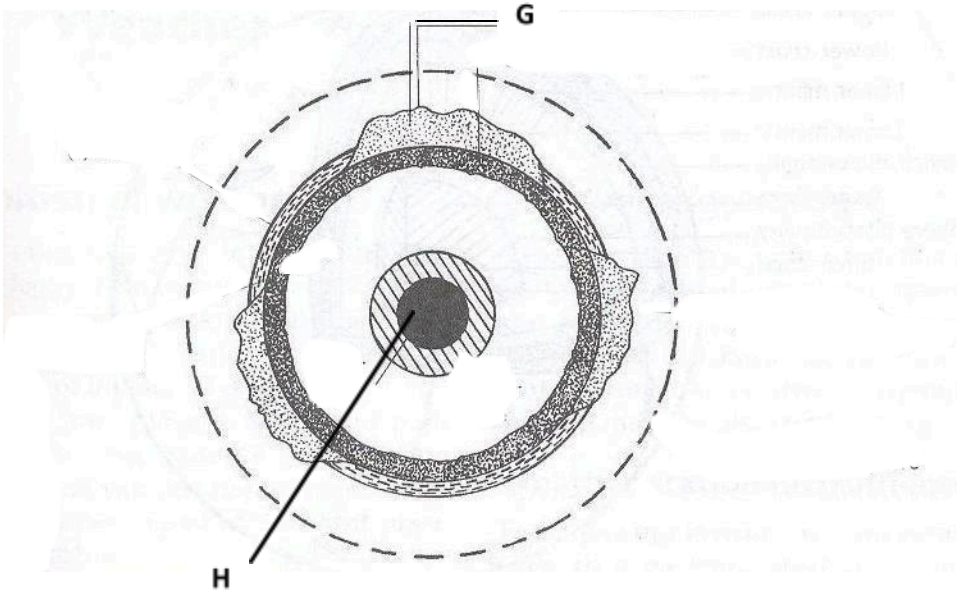
INSTRUCTIONS TO STUDENTS

- *This paper has **two** sections **A** and **B***
- *Answer **ALL** the questions in section **A**. In section **B** answer questions **6** and any other **TWO** questions.*

SECTION A

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

1. The diagram below shows the internal structure of the earth.



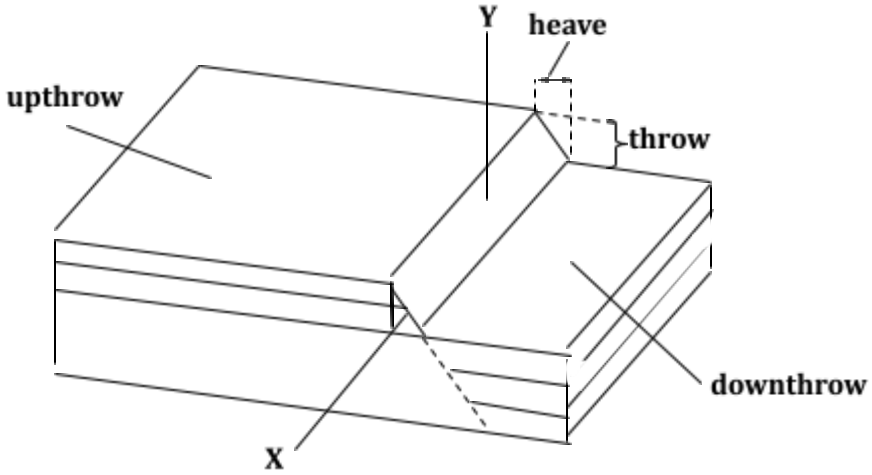
(a) Name the parts marked **G** and **H**. (2 marks)

(b) Name the dominant mineral in the mantle. (1 mark)

2. (a) Differentiate between absolute and relative humidity. (2 marks)

(b) State the significance of humidity in the atmosphere. (3 marks)

3. The diagram below shows some features formed by faulting. (2 marks)



(a) Name the parts marked **X** and **Y**. (2 marks)

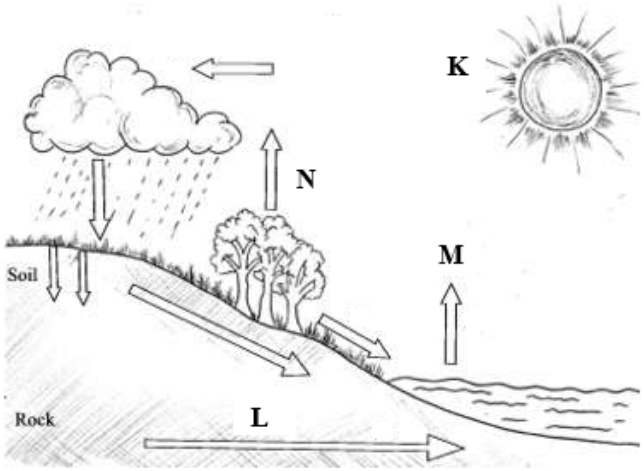
(b) State ***three*** effects of faulting on drainage of an area. (3 marks)

4. (a) Name ***two*** crater lakes in Kenya (2 marks)

(b) State ***three*** characteristics of rift valley lakes (3 marks)

5. (a) Differentiate between a watershed and a catchment area? (2 marks)

(b) The diagram below shows a hydrological cycle.



(b) What processes do the arrows labelled **K, L** and **N** represent? (3 marks)

SECTION B

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

6. Study the map of Kijabe 1:50,000 (sheet 134/3) provided and answer the following questions.

(a) (i) What type of map is KIJABE map extract? (1 marks)

(ii) Give the six-figure grid reference of the cattle dip near Kenton. (2 marks)

(iii) Give the longitudinal extent of the area covered by the map.(2 marks)

(b) (i) Calculate the area to the south of the power line. Give your answer in square kilometers. (2 marks)

(ii) Describe settlement distribution in the area covered by the map. (6 marks)

(c) Explain ***three*** factors favoring cattle rearing in the area covered by the map. (6 marks)

(d) (i) Draw a square 10cm by 10 cm to represent the area enclosed by Eastings 30 and 40 and northings 90 and 00. (1 marks)

(ii) On it mark and label: (3 marks)

- A railway line.
- Bamboo forest.

- A borehole.

(iii) What is the new scale of the square. (2marks)

7. (a) (i) Distinguish between minerals and rocks. (2 marks)

(ii) State ***three*** characteristics of minerals. (3 marks)

(iii) Name ***three*** types of minerals. (3 marks)

(b) (i) Describe how intrusive igneous rocks are formed. (5 marks)

(ii) State ***three*** characteristics of intrusive igneous rocks. (3 marks)

(c) (i) What is rock metamorphism? (2 marks)

(ii) State ***three*** factors that influence rock metamorphism. (3 marks)

(d) Explain ***two*** economic benefits of coral limestone rocks. (4 marks)

8. (a) (i) Differentiate between orogenic and epeirogenic earth movements? (2 marks)

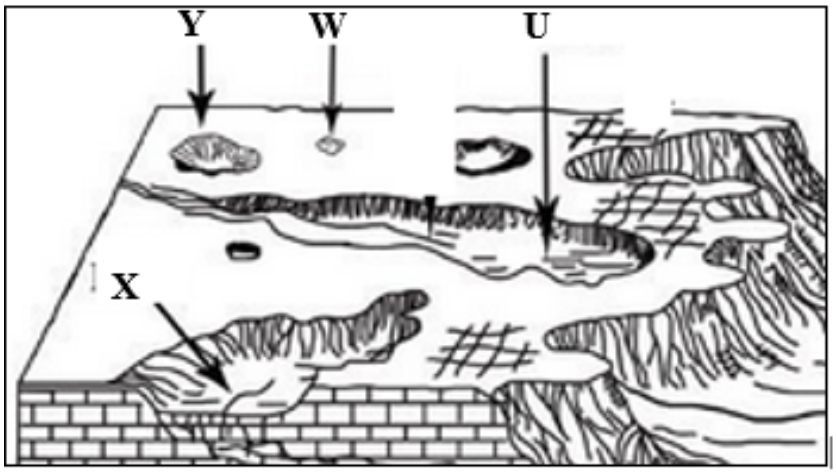
(ii) Describe the origin of continents according to the theory of plate tectonics. (4 marks)

(b) (i) Apart from an overthrust fold, name *three* other types of folds. (3 marks)

(ii) Using well labelled diagrams, describe how fold mountains are formed. (10 marks)

(c) Explain ***three*** negative effects of folding to human activities. (6 marks)

9. The diagram below shows a karst scenery. Study and use it to answer the question that follow.



(a). (i) Identify the features labeled **W** and **Y**. (2 marks)

(ii) State ***four*** conditions necessary for the formation of a karst landscape. (4 marks)

(iii) Describe the formation of a stalagmite. (5 marks)

(b). (i) Name ***two*** water erosional features on a desert landscape. (2 marks)

(ii) Describe the formation of Zeugens. (4 marks)

(iii) Explain ***four*** significance of desert landforms to human activities. (8 marks)

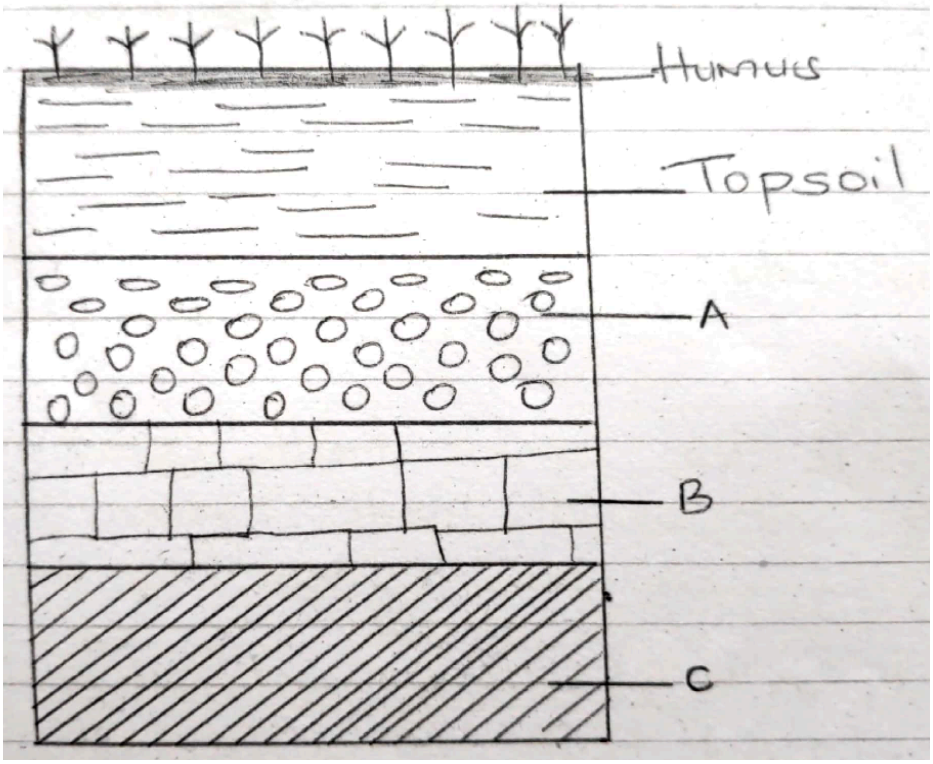
10. (a) Define soils (2 marks)

(b) Explain how the following factors influence soil formation;

(i) Parent material (4 marks)

(ii) Human activities (2 marks)

(c) The diagram below shows a soil profile. Use it to answer question (i) and (ii).



(i) Name the parts marked **X** and **Y**. (2 marks)

(ii) Describe the characteristics of the top soil (4 marks)

(d) (i) Explain ***three*** causes of physical soil degeneration. (6 marks)

(ii) State ***five*** ways of conserving soils (3 marks)