INSTRUCTIONS TO CANDIDATES:

(a) *This paper consists of two sections A and B.*

(b) *Answer ALL questions in Section A. In section B answer question 6 and any other two questions.*

(c) *All answers must be written in the answer booklet provided.*
SECTION A

Answer ALL Questions.

1. (a) State three effects of the revolution of the earth. (3mks)
   
   (b) If the time in Nairobi, Kenya (longitude 34°E) is 1600 hours, what is the time in Accra, Ghana (Longitude 0°)? (3mks)

2. (a) Identify two human causes of earthquakes. (2mks)
   
   (b) State three effects of earthquakes on built up areas. (3mks)

3. Study the diagram below and answer the questions that follow.

   (a) Name the feature shown on the diagram. (1mk)
   
   (b) Name parts labeled X, Y and Z. (3mks)

4. (a) State two underground features in limestone areas. (2mks)
   
   (b) Mention three conditions necessary for development of Karst features. (3mks)

5. (a) What is natural vegetation? (2mks)
   
   (b) Name the temperate grasslands found in the following countries: (3mk)
   
      (i) Canada
      (ii) Russia
      (iii) Australia

SECTION B

Answer question 6 and any other two questions in this section

6. Study the map provided of Kitale (1:50,000) sheet 75/3 and answer the following questions.

   (a) (i) Convert the scale of the map extract into a statement scale. (2mks)
   
      (ii) Identify two man made features found on the North of northing 18 and West of Easting 30. (2mks)
   
      (iii) What is the altitude of the highest point in the area covered by the map? (2mks)
   
      (iv) Give three methods of showing relief that have been used on the area Covered by the map. (3mks)
   
      (v) State two types of rivers found in the area covered by the map. (2mks)
(b) Draw a rectangular frame measuring 7cm by 5cm to represent the area enclosed by the Eastings 26 and 33 and Northings 15 and 20. (1mk)

On the Rectangle mark and name the following features:-

i. River Koitobos (1mk)
ii. The loose surface road C641 (1mk)
iii. The seasonal swamp. (1mk)

(c) Citing evidence from the map; give four economic activities carried out in the area covered by the map. (4mks)

(d) Some students are required to carry out a field study at Kapolet forest.

(i) Give three reasons why it would be necessary for them to sample part of the forest. (3mks)

(ii) Explain two ways in which their findings would be useful to the community. (4mks)

7. (a) Differentiate between magma and lava. (2mks)

(b) The diagram below shows some intrusive volcanic features.

![Diagram of volcanic features](image)

(i) Name the features marked P, Q, R and S. (4mks)

(ii) Describe how the following features are formed and for each given an example from Kenya.

- A crater (3mks)
- A geyser (5mks)
- A lava plateau (4mks)

(c) State four ways in which volcanic features influence human activities. (4mks)

(d) State three characteristics of basic lava. (3mks)

8. (a) (i) What is an ice sheet? (2mks)

(ii) Give two reasons why there are no ice sheets in Kenya. (2mks)
(iii) Explain **three** factors that influence the movement of ice from the place where it has accumulated. (6mks)

(b) (i) Describe how an arête is formed. (4mks)

(ii) Explain **four** possible effects of glaciations in Lowland areas. (8mks)

(c) The diagram below shows types of moraines in a valley glacier. (6mks)

![Diagram of moraines in a valley glacier]

(i) Name the types of moraines marked S, T and V. (3mks)

(ii) State **three** methods you could use to collect your data. (3mks)

9. (a) State **three** ways through which sedimentary rocks are formed. (3mks)

(b) Explain **three** processes through which rocks change to metamorphic rocks. (6mks)

(c) Give **two** examples of each of the following igneous rocks:

   (i) Plutonic rock. (2mks)

   (ii) Hypabyssal rock. (2mks)

   (iii) Volcanic rock. (2mks)

(d) Suppose you were to carry out a field study of rocks within the vicinity of your school:

   (i) Name **three** secondary sources of information you would use to prepare for the field study. (3mks)

   (ii) State **three** activities you would carry out during the field study. (3mks)

   (iii) State **three** problems you are likely to face during the field study. (3mks)

   (iv) State the **main** reason why students prepare a work schedule. (1mk)

10. (a) (i) Define artesian well. (2mks)

   (ii) Give **three** sources of underground water. (3mks)

   (iii) Distinguish between permeable and porous rocks. (2mks)

(b) (i) Mention **two** features associated with underground water. (2mks)

   (ii) Explain **four** factors that affect the occurrence of underground water. (8mks)

(c) Explain **four** importance of underground water. (6mks)