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) Define the term Equinox. (2mks)
   (b) What is the longitude whose local time is 5.00p.m. when the local time at longitude $0^0$ is 8.00p.m. (3mks)

2. (a) Name the instrument used to measure sunshine. (1mk)
   (b) State four factors that determine the amount of solar radiation reaching the Earth’s surface. (4mks)

3. (a) State three ways in which faulting can influence drainage system. (3mks)
   (b) Name any two block mountains in Kenya. (2mks)

4. (a) Distinguish between plutonic rocks and volcanic rocks. (2mks)
   (b) State three types of rock metamorphism. (3mks)

5. (a) State two ways through which rivers transport its load. (2mks)
   (b) The diagram below represents a river capture.

   Name the features marked A, B and C. (3mks)

SECTION B

Answer question 6 and any other two questions in this section

6. Study the map of Kitale (1:50,000) sheet 75/3 provided and answer the following questions:
   (a) (i) Name the relief feature found in grid square 2823. (1mk)
       (ii) Determine the distance of road B 10/2 from Knight’s corner junction with Road C637 to Kitale. (2mks)
       (iii) Find the area of Kiptaberr Forest. (2mks)
       (iv) Give the approximate position of Morkwijit village North of Dalgany Farm by latitude and longitude. (2mks)
   (b) (i) Using a scale of 1cm to represent 50m draw a cross section from 310210 to 380210 and on the cross section mark and label:
       i. The swamp (5mks)
       ii. Road and (3mks)
       iii. Settlement
(ii) Giving evidence, state **three** factors which have influenced dense settlement in the area East of Easting 40. (3mks)

(c) Citing evidence from the map; identify **three** factors which have influenced the growth of forests in Kitale area. (3mks)

(d) State **four** functions of Kitale town. (4mks)

7. (a) (i) Define Karst scenery. (2mks)

(ii) State **two** characteristics of the Karst scenery. (2mks)

(b) With the aid of a diagram, describe the formation of a Polje. (6mks)

(c) Draw a well labeled diagram showing the following underground features of a Karst scenery.

- Stalactite
- Stalagmite
- Limestone pillar / rock pillar
- Cavern

(d) You are supposed to carry out a field study of an area eroded by water.

(i) Give **three** reasons why you would conduct a reconnaissance. (3mks)

(ii) Name **three** surface features that you are likely to identify during the field study. (3mks)

(iii) State **three** recommendations that you would make from your study so as to assist the local community to rehabilitate the area. (3mks)

8. (a) (i) Define the term Vulcanicity. (2mks)

(ii) Name **two** features resulting from fissure eruptions. (2mks)

(b) With the aid of a diagram, describe the formation of the following intrusive features:

i. Sill (3mks)

ii. Dyke (3mks)

iii. Batholith (3mks)

(c) Explain **three** positive effects of vulcanicity to human activities. (6mks)

(d) You have been asked to carry out a field study in Mount Kenya on Vulcanicity.

(i) Name **three** follow-up activities you will undertake. (3mks)

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

(e) Explain **three** problems limiting the growth of softwood forest in Canada. (6mks)
9. (a) Name three types of desert surfaces. (3mks)
(b) Explain the following process of wind erosion.
   (i) Abrasion. (2mks)
   (ii) Deflation. (2mks)
   (iii) Attrition. (2mks)
(c) With the aid of a diagram, describe how Rock pedestal is formed. (6mks)
(d) Draw a clear diagram of overhead view of a desert basin. On it mark and name the following features resulting from water action: (5mks)
   (i) Alluvial fan
   (ii) Pediment
   (iii) Player
   (iv) Bajada
(e) State five positive significance of desert features. (5mks)

10. (a) Define the following terms:
    (i) Coastline (2mks)
    (ii) Shore (2mks)
(b) (i) Label the diagram shown below. (4mks)
![Diagram of coastline with labeled A, B, C, and D]
(ii) Explain three factors which affect horizontal movement of ocean waters. (6mks)
(c) Explain three factors that affect wave deposition. (6mks)
(d) Name two causes of ocean tides. (2mks)
(e) Your class visited the Kenyan Coast for a geographical field study on oceans. State three objectives of your study. (3mks)