

312/1
GEOGRAPHY
Paper 1
JUNE 2017
Time: 2¾ hours

KASSU-JET JOINT EXAMINATION
Kenya Certificate of Secondary Education
312/1
Paper 1
GEOGRAPHY

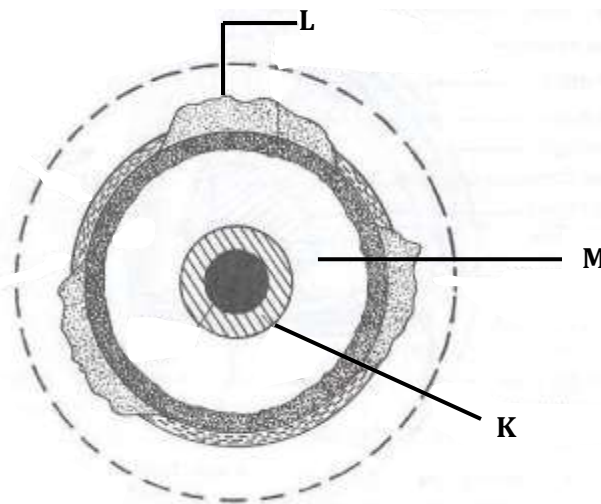
INSTRUCTIONS TO STUDENTS

- 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.

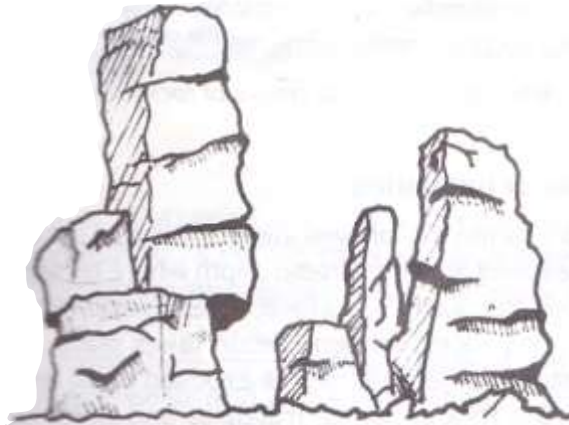
SECTION A

Answer *all* the questions in this section.

1. (a) Name any *two* constituents of the atmosphere. (2 marks)
- (b) The diagram below represent the structure of the earth. Use it to answer the questions that follow.



- Name the parts marked **K**, **L** and **M**. (3 marks)
2. (a) State **three** characteristics of extrusive igneous rocks. (3 marks)
- (b) Name the metamorphic equivalent of the following rocks. (2 marks)
- Peridotite
 - Mud stone
3. Use the diagram below to answer the questions that follows.



- (a) Identify the weathering process shown above. (1 mark)
- (b) Describe how rocks are weathered through the above process. (4 marks)
4. (a) Differentiate between till deposits and fluvio-glacial deposits. (2 marks)
- (b) Describe how roche moutonnee is formed. (4 marks)
5. (a) State **two** conditions which influence wind erosion. (2 marks)
- (b) Name **two** features from water deposition in arid areas. (2 marks)

SECTION B

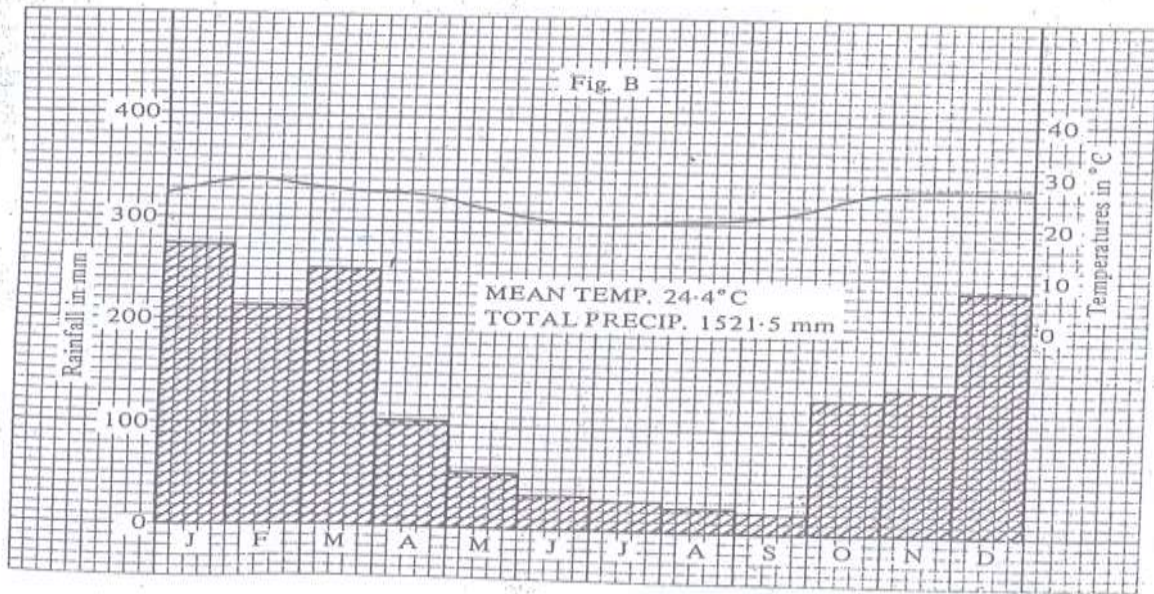
Answer question 6 and any other TWO questions from this section.

6. Study the map of Migwani 1:50,000 (sheet 151/1) provided and answer the questions that follow.
- (a) (i) Give the six figure grid reference of Itoloni dam. (1 mark)
- (ii) What is the bearing and direction of Muanzoa rock outcrop from Nzeluni school? (1 mark)

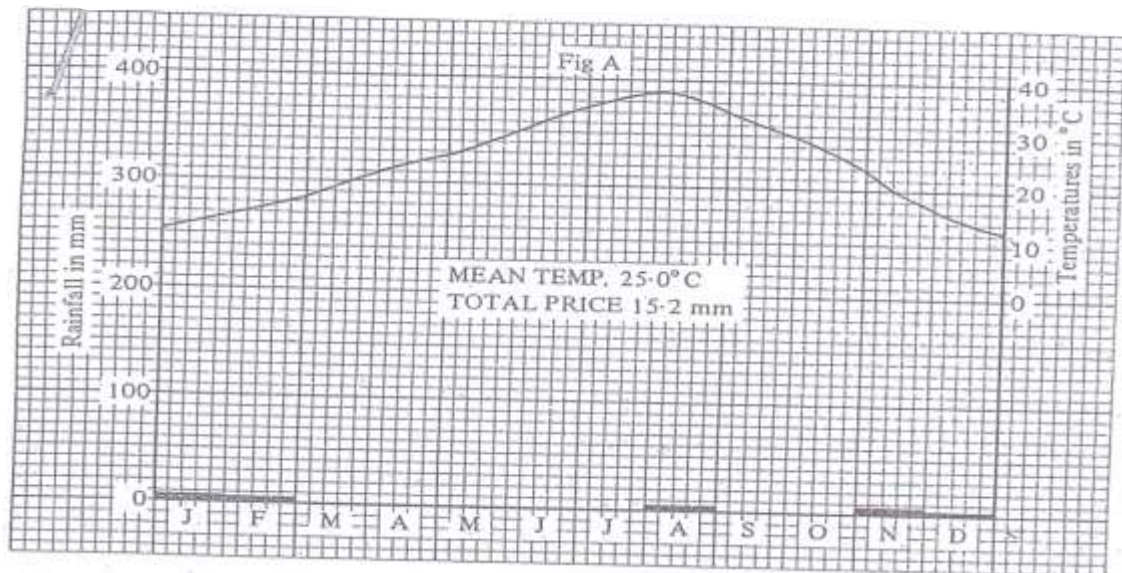
- (iii) Give the position of Nzia hill by latitude and longitude. (2 marks)
- (b) (i) Measure the distance of the All Weather Road loose surface from Migwani to the end in the North West near Thokoa. Give your answer in metres. (2 marks)
- (ii) Calculate the area bounded by the dry weather road and the All Weather Road loose surface to the North West. (2 marks)
- (c) (i) Name the **three** social functions of Migwani town. (3 marks)
- (ii) Draw a sketch section along line JK. (2 marks)
- On it, mark and name the following features:
- Dry weather road (1 mark)
 - Steep slope (1 mark)
 - Hill (1 mark)
- (d) (i) Describe the relief of the area shown on the map extract. (5 marks)
- (ii) Citing evidence from the map explain **three** factors that favour livestock keeping. (6 marks)
7. (a) (i) What is a weather station? (2 marks)
- (ii) Explain **two** characteristics of Stevenson screen. (4 marks)
- (b) (i) Describe how a hygrometer is used to measure relative humidity. (3 marks)
- (ii) State **two** reasons why the recording of data at the school weather station may be inaccurate. (2 marks)
- (iii) Give the reason why air cools as it rises. (2 marks)

- (c) The graphs below shows climate characteristics of two stations in Africa. Use them to answer questions (i) and (ii).

GRAPH 1



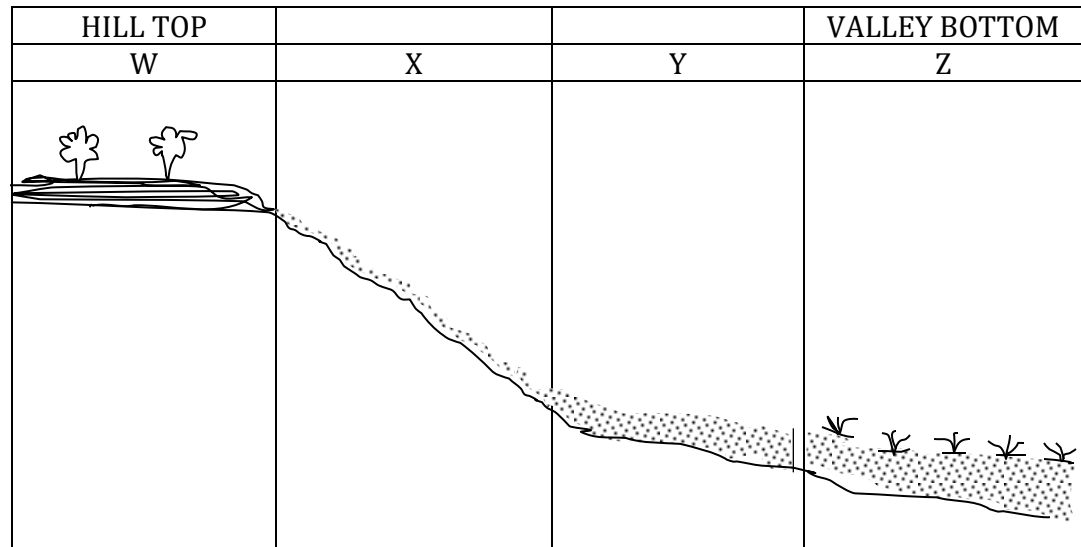
GRAPH 2



- (i) Name the type of climate represented by each graph. (2 marks)
- (ii) Describe the characteristics of the climate represented by each graph. (8 marks)

- (iii) State **two** negative effects of desertification. (2 marks)
8. (a) Distinguish between orogenic and epeirogenic earth movements. (2 marks)
- (b) Describe the origin of African plate according to the theory of continental drift. (4 marks)
- (c) Explain how the following causes earth movement
- Convectional currents in the mantle (3 marks)
 - Gravitative pressure (3 marks)
- (d) State **three** factors influencing folding of sedimentary rocks. (3 marks)
- (e) Identify the fold mountain ranges formed during the following orogenies.
- Alpine (1 mark)
 - Hercynian (1 mark)
- (f) With the aid of well labelled diagrams, describe how fold mountains are formed. (8 marks)
9. (a) Distinguish between river regime and river discharge. (2 marks)
- (b) (i) State **three** factors influencing river transport. (3 marks)
- (ii) Describe **three** processes through which a river transports its load. (6 marks)
- (c) With the aid of a well labelled diagram, describe how a river braid is formed. (6 marks)
- (d) Students of Sabaki Secondary School carried out a field study on river rejuvenation on River Athi.
- (i) State **three** causes of river rejuvenation they found out. (3 marks)
- (ii) Name **three** features formed by river rejuvenation they are likely to have identified. (3 marks)
- (iii) Identify **two** problems they may have encountered during the field study. (2 marks)
10. (a) (i) What is soil? (2 marks)
- (ii) Identify **two** components of soils. (2 marks)
- (iii) Differentiate between soil structure and soil texture. (2 marks)

- (iv) Name **two** types of soil according to soil texture. (2 marks)
- (b) Explain how the following factors influence the formation of soil.
- (i) Climate (2 marks)
- (ii) Topography (2 marks)
- (c) The diagram below shows a soil catena.



- (i) Name the type of soils found in position **W** and **Z**. (2 marks)
- (ii) State **two** characteristics of soils found in section marked **W** and **Z**. (4 marks)
- (d) Explain **two** causes of chemical soil degeneration. (4 marks)
- (e) State **three** measures of conserving soils. (3 marks)