

312/1  
GEOGRAPHY  
Paper 1  
March, 2023  
Time 2 hours 45 min.

**MOKASA II JOINT EXAMINATION**  
Kenya Certificate of Secondary Education  
312/1  
Paper 1  
**GEOGRAPHY**

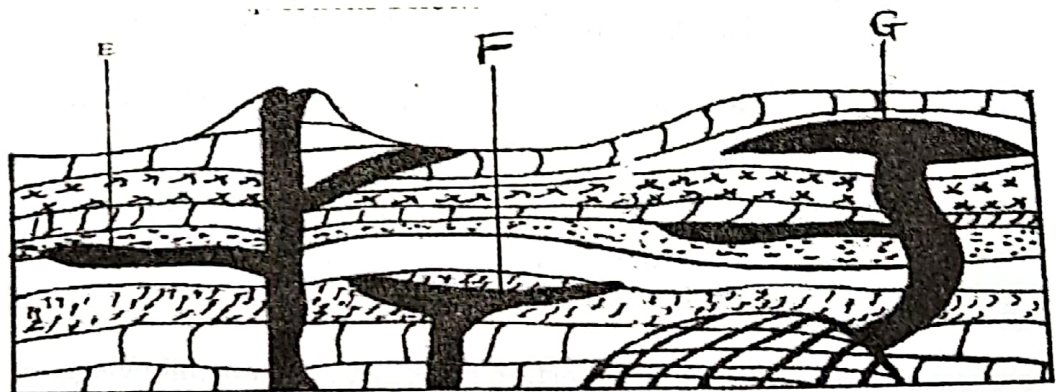
**INSTRUCTIONS TO STUDENTS**

- 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: 25 MARKS**

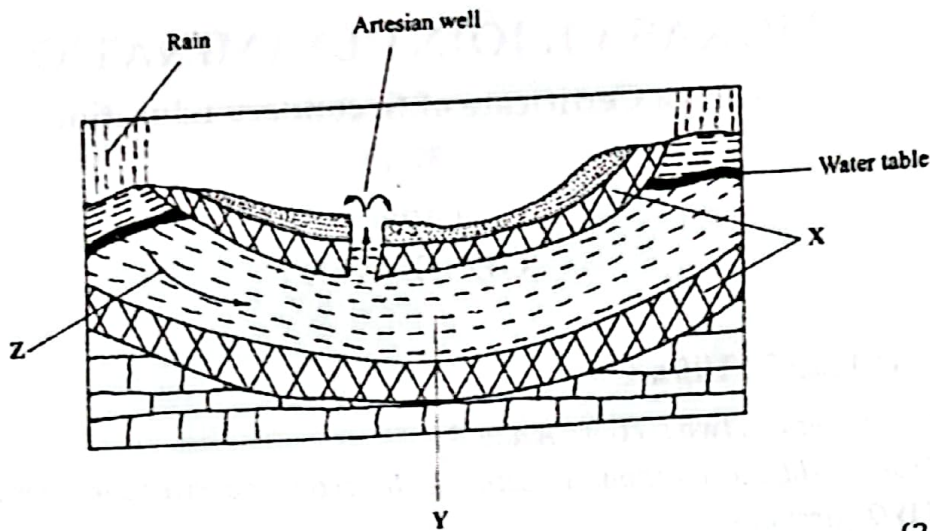
Answer ALL questions in this section

- (a) What is the relationship between Geography and Chemistry. (2 Marks)
  - (b) State the importance of studying Geography. (3 Marks)
- (a) Give *three* evidence showing that the interior of the earth is hot. (3 Marks)
  - (b) Define the term solstice. (2 Marks)
3. The diagram below show intrusive volcanic features.



- (a) Name the landforms marked E and F. (2 Marks)

4. (b) Describe how the laccolith is formed. (3 Marks)  
 (a) State *two* factors influencing the rate of wave deposition. (2 Marks)  
 (b) Describe how a spit is formed. (3 Marks)
5. The diagram below shows an artesian basin.



- (a) Name the part marked X and the process marked Z. (2 Marks)  
 (b) State *three* conditions necessary for the formation of artesian basin. (3 Marks)

### SECTION B

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

6. (a) Study the map of Kisumu East 1:50 000 (sheet 116/2) provided and answer the Following questions.
- (i) Name *three* physical features found in grid square 0788. (3 marks)
- (ii) Measure the length of the All Weather Road bound surface B25/3 to the East of Easting's 02. Give your answer in Km. (2 marks)
- (iii) Give the hemisphere of the area represented by Kisumu East map extract? (1 mark)
- (b) (i) Using a vertical scale of 1cm to represent 100 metres, draw a cross section of Kisumu East from grid reference 960950 to grid reference 020920. (4 marks)
- (ii) On the cross section mark and label the following.
- Hill (1 mark)
  - River (1 mark)

- Railway line (1 mark)
  - All weather roads bound surface C543/1 (1 mark)
- (iii) Determine the intervisibility of the starting point and end point of your cross section. (1 mark)
- (c) (i) Describe the drainage of the area covered by the map. (5 marks)
- (ii) Citing evidence from the map, state **five** functions of Kisumu town. (5 marks)
7. (a) (i) Distinguish between minerals and rocks. (2 marks)
- (ii) Describe the following characteristics of minerals.
- Colour (2 marks)
  - Hardness (2 marks)
- (b) (i) What are sedimentary rocks? (2 marks)
- (ii) Give **three** sources of the particles which form sediments that form sedimentary rocks. (3 marks)
- (iii) Describe **two** ways through which sedimentary rocks are formed. (4 marks)
- (c) (i) Describe the thermal dynamic process of rock metamorphism? (3 marks)
- (ii) State **two** changes that occur in sedimentary rocks, when they are subjected to intense heat and pressure. (2 marks)
- (d) Give **five** uses of rocks. (5 marks)
8. (a) (i) Identify **three** types of folds (3marks)
- (ii) Apart from Fold Mountains, identify **three other** features resulting from folding. (3marks)
- (b) Identify the countries where each of the following fold mountains is found.
- Andes (1 mark)
  - Rockies (1 mark)
  - Alps (1 mark)
- (c) (i) Differentiate between orogeny and orogenesis. (2 marks)
- (ii) Using well labelled diagrams, describe how Fold Mountains are formed (8 marks)
- (d) Explain the effects of fold mountains on climate. (6 marks)

9. (a) (i) Define river catchment. (2 marks)  
(ii) Give **three** importance of measuring river discharge. (3 marks)
- (b) (i) Identify **two** types of river erosion. (2 marks)  
(ii) Explain **two** ways in which a waterfall may form. (4 marks)  
(iii) Using well labelled diagrams, describe how an Ox-bow lake is formed. (8 marks)
- (c) Explain **three** significance of rivers and resultant features to human activities. (6 marks)
10. (a) (i) What is soil? (2 marks)  
(ii) Name **three** components of soil. (3 marks)
- (b) (i) Describe laterization as a process of leaching. (4 marks)  
(ii) Describe how the following types of erosion occur.  
• Rill erosion. (3 marks)  
• Sheet erosion (2 marks)
- (c) (i) Apart from leaching, give **three** other processes of soil formation. (3 marks)  
(ii) Explain **four** measures being taken to conserve soil in Kenya. (8 marks)