1. (a) What is the relationship between Geography and Chemistry? (2 marks)

(b) The diagram below shows the internal structure of the earth.

![Diagram of the earth's internal structure](image)
(i) Name the parts marked G and H. (2 marks)

(ii) 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)

   ![Diagram of faulting features](image)

   (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) Identify two scales used to measure the intensity of an earthquake. (2 marks)

   (b) Give three major earthquake zones of the world. (3 marks)

5. (a) State two ways in which plants cause weathering. (2 marks)

   (b) Describe the process of weathering through oxidation. (3 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 following questions.

   (a) (i) What is the altitude of the lowest contour shown on the map? (1 mark)

   (ii) Give the six-figure grid reference of Mboni dam. (2 marks)
(iii) What is the length in Kilometres of the All Weather Road Bound Surface C94 from the junction with the Dry Weather Road D502 to Northing 84? (2 marks)

(b) Draw a rectangle measuring 10 cm by 8 cm to represent the area enclosed by Eastings 90 and 00 and Northings 62 and 70. (1 mark)

On the rectangle, mark and name the following features:

(i) Musengo school
(ii) Road E742
(iii) Kitui Hills (3 marks)

(c) (i) Citing evidence from the map, identify four social services offered in Mutitu (Ndooa) township. (4 marks)
(ii) Describe the relief of the area covered by the map. (6 marks)

(d) Describe the characteristics of the long profile of river Ikoo. (6 marks)

7. (a) (i) Describe the following characteristics of minerals:

- Texture (1 mark)
- Tenacity (1 mark)

(ii) Describe how extrusive igneous rocks are formed. (4 marks)

(b) For each of the following rocks, name the resultant rock that forms after metamorphism.

(i) Sandstone (1 mark)
(ii) Limestone (1 mark)
(iii) Granite (1 mark)

(c) Explain three economic significance of rocks in Kenya. (3 marks)

(d) Students carried out a field study on rocks around their school.

(i) State two importance of stating the objectives for their study. (2 marks)

(ii) Give three reasons why they prepared a route map of the study area. (3 marks)
(iii) Give three activities that the students were involved in during the field study. (3 marks)

8. (a) (i) What is an orogeny? (2 marks)

(ii) Give two factors that influence the folding process of rocks. (2 marks)

(b) The diagram below shows some types of folds. Use it to answer the question (i) and (ii).

   ![Diagram of geological folds](image)

   (i) Name the types of folds marked E and F. (2 marks)

   (ii) Describe how an overthrust fold is formed. (4 marks)

(c) Name the countries in which the following fold mountains are found.

   (i) Atlas (1 mark)

   (ii) Alps (1 mark)

   (iii) Himalayas (1 mark)

   (iv) Andes (1 mark)

(d) (i) Apart from fold mountains, name three other features resulting from folding. (3 marks)

(ii) Explain four ways in which fold mountains influence climate. (8 marks)

9. (a) (i) Differentiate between a marine delta and a Lacustrine delta. (2 marks)
(ii) Explain three conditions necessary for the formation of a delta. (6 marks)

(iii) State three significance of deltas to man. (3 marks)

(b) (i) What is a braided channel? (2 marks)

(ii) State four conditions necessary for the formation of a braided channel. (4 marks)

(c) With the aid of well labelled diagrams, describe how an ox-bow lake is formed. (8 marks)

10. (a) What is Karst scenery? (2 marks)

(b) State four factors which influence the development of a karst landforms. (4 marks)

(c) The diagram below shows a feature in a Karst landscape. Use it to answer question (i) and (ii).

![Diagram of Karst landscape]

(i) Name the parts marked X, Y and Z. (3 marks)

(ii) Describe how the features marked Y and Z are formed. (5 marks)

(d) (i) Define a lake. (2 marks)

(ii) Name two types of lakes which are formed by volcanic activity. (2 marks)

(iii) State three reasons why some lakes are salty. (3 marks)

(iv) Explain four ways in which lakes are of significance to human activities. (4 marks)
INSTRUCTIONS TO CANDIDATES

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

Answer ALL the questions in this section.

1. a) State two ways in which minerals occur (2 marks)
    b) Describe panning as a method of mining (3 marks)

2. a) Differentiate between a Forest and forestry (2 marks)
    b) Give three characteristics of Tropical hard-wood forest (3 marks)

3. a) Name two main rivers which supply water to Mwea-Tebere irrigation scheme (2 marks)
    b) State three environmental problems faced by farmers in Mwea-Tebere irrigation scheme (3 marks)

4. a) Give two methods used to rehabilitate land in Kenya (2 marks)
    b) State three benefits of Perkerra Irrigation scheme (3 marks)

5. a) What is a game sanctuary (2 marks)
    b) State three reasons for encouraging domestic tourism in Kenya (3 marks)

SECTION B:

Answer question 6 and any other TWO questions from this section

6. Study the photograph below and use it to answer question (a)
a) (i) Name the type of photograph shown above (1 mark)

(ii) What time of the day was the photograph taken if the camera was held facing South? (1 mark)

(iii) Draw a rectangle measuring 16cm by 9cm to represent the area of the photograph. On it sketch and label the main features shown on the photograph (5 marks)

(iv) Describe the landscape of the area represented by the photograph. (3 marks)

b) (i) Identify two counties in the Rift Valley where ranching is practiced. (2 marks)

(ii) Name one exotic breed of beef cattle reared in Kenya (1 mark)

c) State four physical factors which favour beef farming in Argentina (4 marks)

d) Explain four benefits of beef farming to the economy of Argentina (8 marks)

7. a) Define agro-forestry (2 marks)

b) State three benefits of agro-forestry (3 marks)

c)i) Explain how the following factors have influenced distribution of natural forests in Kenya

   - Aspect (2 marks)
   - Soils (2 marks)

ii) Explain four ways of managing forests in Kenya (8 marks)
d) Compare softwood forestry in Kenya and Canada under the following sub-headings
   • Transportation (2 marks)
   • Harvesting (2 marks)
   • Climate (2 marks)
   • Distribution (2 marks)

8. a) What is mixed farming? (2 marks)
   b) State three economic factors influencing agriculture (3 marks)
   c)i) Give four physical factors influencing coffee growing in Kenya (4 marks)
   ii) Describe coffee productions in Kenya from harvesting to marketing (8 marks)
   iii) Give three differences between coffee farming in Kenya and Brazil (6 marks)
   d) You intend to carry out a field study on coffee growing in a farm near your school.
      State two disadvantages of using secondary data during data collection (2 marks)

9. Use the map of North America below to answer questions (a) and (b)

   a) Name
(i) The fishing ground shaded (1 mark)
(ii) The ocean current marked (b) (1 mark)

b) Explain four physical conditions necessary for fishing in the fishing ground shaded. (8 marks)

c) Describe trawling method of fishing (6 marks)

d)i) Explain three ways in which overfishing can be controlled in Lake Naivasha (6 marks)
i) State three significance of fish farming (3 marks)

10. a)i) Apart from coal, name three other non-renewable sources of energy (3 marks)
    ii) State four reasons why there has been a decline in the use of coal as a source of energy (4 marks)
    iii) Give three advantages of using wind energy (3 marks)

b) Name two examples of agricultural non-food processing industries in Kenya (2 marks)

c) Below is a sketch map of the Ruhr Industrial Region. Use it to answer question (i)

(i) Name:
   • The canal market U (1 mark)
   • The river marked V (1 mark)
   • The town marked W (1 mark)

(ii) Explain three factors which led to the growth of iron and steel industry in the Ruhr region of Germany (6 marks)
d) Explain **two** environmental problems which have resulted from the development of car manufacturing industry in Japan (4 marks)