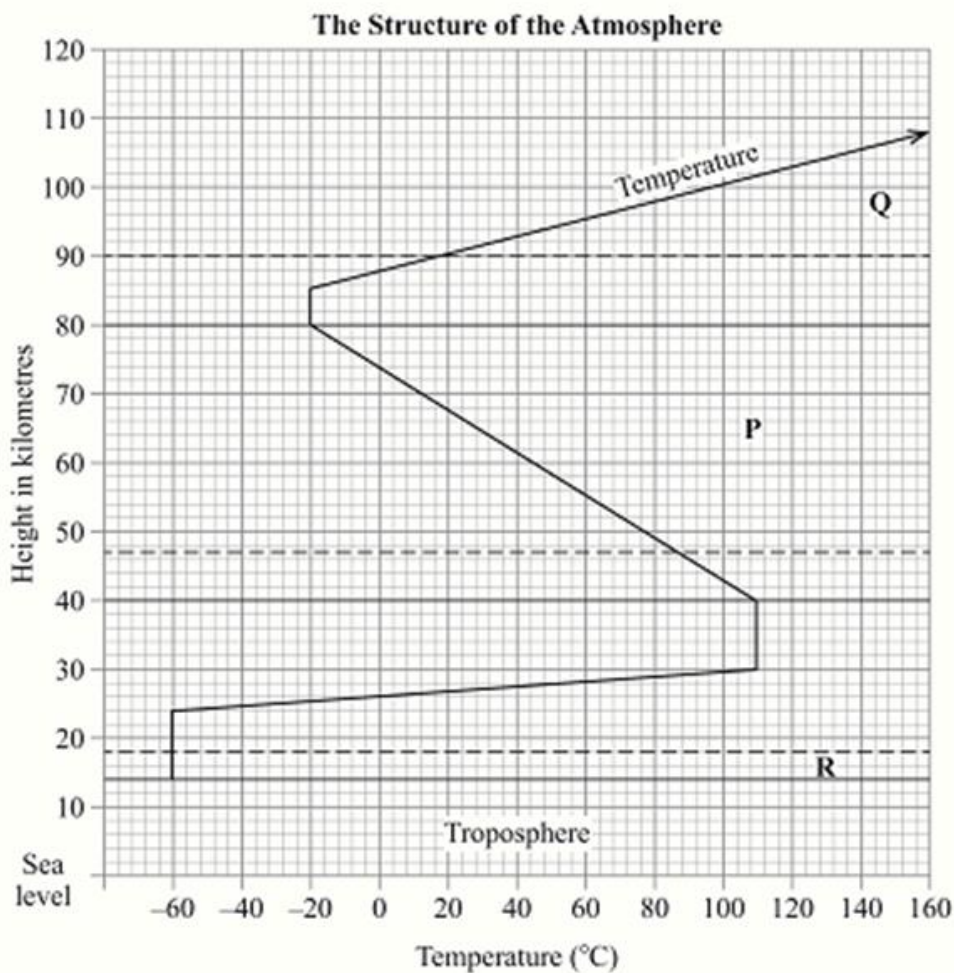


3.9.1 Geography Paper 1 (312/1)

SECTION A

Answer **ALL** the questions in this section.

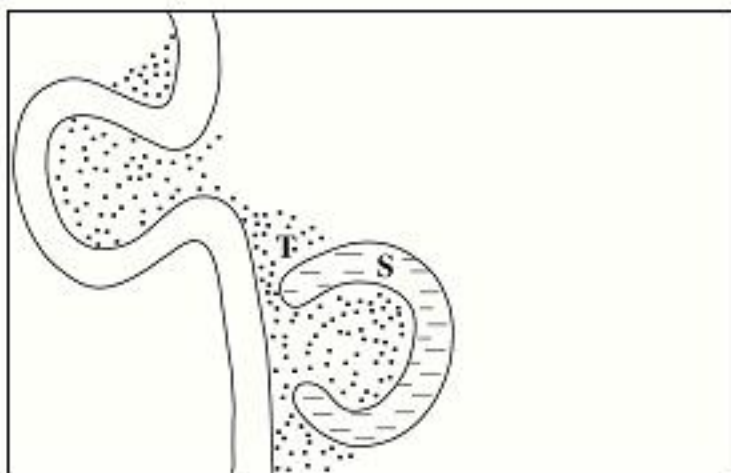
1. The diagram below represents the structure of the atmosphere. Use it to answer question (a).



- (a) Name
- the parts marked **P** and **Q**. (2 marks)
 - the layer of discontinuity marked **R**. (1 mark)
- (b) State **two** characteristics of the weather conditions in the troposphere. (2 marks)
2. State **five** factors that influence mass wasting. (5 marks)



3. The diagram below shows a section of a river. Use it to answer the questions that follow.



- (a) Name the features marked **S** and **T**. (2 marks)
- (b) State **three** conditions that are necessary for the formation of the feature marked **S**. (3 marks)
4. (a) What is the difference between ice sheets and ice berg? (2 marks)
- (b) Name **three** types of glacial moraines. (3 marks)
5. (a) Give **two** types of soil degeneration. (2 marks)
- (b) State **three** economic benefits of soils. (3 marks)

SECTION B

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

6. Study the map of Karatina 1:50,000 (sheet 121/3) provided and answer the following questions.
- (a) (i) What is the four figure grid reference of the Technical Institute at Mathira? (2 marks)
- (ii) What is the bearing of Mount Kenya Campus at grid reference 932568 from the cattle dip at grid reference 990529? (2 marks)
- (iii) Measure the distance of the railway line from the Level Crossing at grid square 8652 to the Southern edge of the map. Give your answer in kilometres. (2 marks)
- (b) Draw a rectangle measuring 15 cm by 10 cm to represent the area enclosed by Eastings 90 and 100 and Northing 50 and 60. (1 mark)



On the rectangle mark and name the following:

- (i) Kirinyaga District;
- (ii) All Weather Road Bound Surface;
- (iii) Forest;
- (iv) Coffee factory.

(4 marks)

- (c) Describe the distribution of the natural vegetation in the area covered by the map.

(6 marks)

- (d) Identify **two** social functions of Karatina town.

(2 marks)

- (e) Citing evidence from the map, explain **three** factors that favour trading in the area covered by the map.

(6 marks)

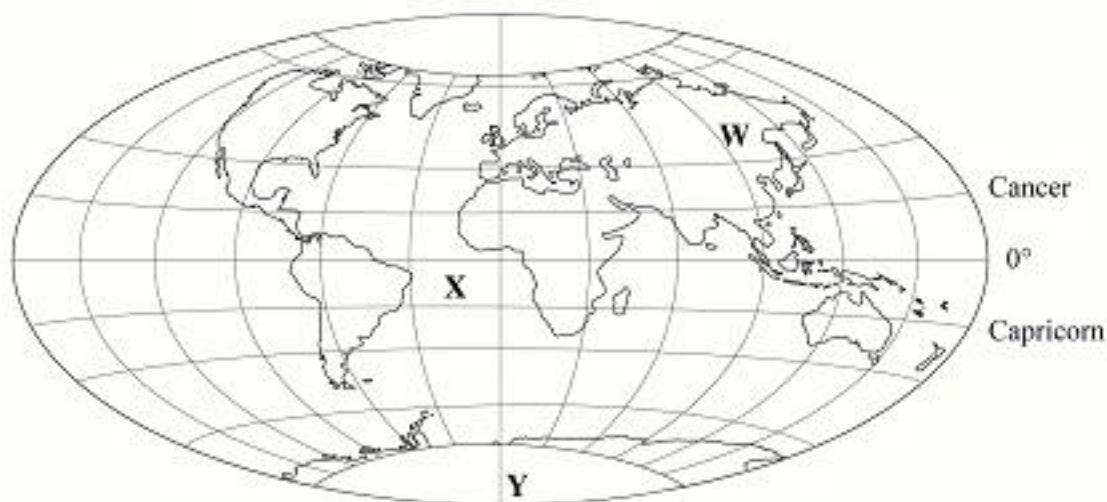
7. (a) Name the first **two** planets of the solar system.

(2 marks)

- (b) Explain the origin of the earth according to the Nebula Cloud Theory.

(8 marks)

Use the map below to answer questions (c)(i)



- (c) (i) Name:

I the continent marked **W**;

(1 mark)

II the ocean marked **X**;

(1 mark)

III the line of longitude marked **Y**.

(1 mark)

- (ii) Give **two** reasons why the earth has a spherical shape.

(4 marks)

- (iii) State **four** effects of the rotation of the earth on its axis.

(4 marks)



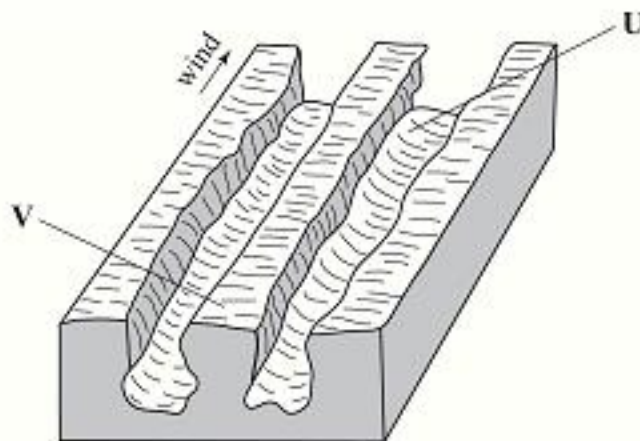
- (d) Describe the structure of the earth's crust. (4 marks)
8. (a) What is volcanicity? (2 marks)
- (b) (i) Apart from a sill, name **three** other intrusive volcanic features. (3 marks)
- (ii) Describe how the following features are formed:
- I a sill; (3 marks)
- II hot springs; (5 marks)
- III a caldera. (4 marks)
- (c) Explain **four** negative effects of earthquakes. (8 marks)
9. (a) What is vegetation? (2 marks)
- (b) Explain how the following factors influence the distribution of vegetation:
- (i) relief (2 marks)
- (ii) soils. (4 marks)
- (c) Describe the characteristics of the savanna vegetation region. (6 marks)
- (d) You are planning to carry out a field study in a forest.
- (i) Give **four** reasons why it is important to seek permission from the school administration. (4 marks)
- (ii) List **three** sources of information you are likely to use before the actual field study. (3 marks)
- (iii) Identify **four** challenges you are likely to encounter during the field study. (4 marks)



10. (a) (i) Name **two** major deserts found in Africa.

(2 marks)

The diagram below represents features resulting from wind erosion in a desert. Use it to answer question a(ii).



(ii) Name the features marked **U** and **V**.

(2 marks)

(b) Describe the **three** processes through which wind transports its load.

(6 marks)

(c) Using a well labelled diagram, describe how a barchan is formed.

(7 marks)

(d) Explain **four** ways in which desert features are of significance to human activities.

(8 marks)



SECTION A*Answer **all** the questions in this section.*

- 1 (a) Name the method of irrigation used in the Perkerra irrigation scheme. (1 mark)
- (b) State **three** factors that influenced the location of the Perkerra irrigation scheme. (3 marks)
- 2 State **four** effects of human encroachment into wildlife habitats. (4 marks)
- 3 (a) Name **two** countries to which Kenya exports petroleum products. (2 marks)
- (b) State **four** factors that influence external trade in Kenya. (4 marks)
- 4 (a) State **two** factors that lead to the development of nucleated settlement patterns. (2 marks)
- (b) Identify **two** differences in the functions of Nairobi and New York. (4 marks)
- 5 Identify **five** ways that are used to control floods in Kenya. (5 marks)

SECTION B*Answer **question 6** and any other **two** questions from this section.*

- 6 The table below shows the approximate population size of four districts in Nairobi in the year 2009.

Use it to answer question (a)

**POPULATION OF FOUR DISTRICTS
IN NAIROBI**

District	Population size
Nairobi West	685,000
Nairobi East	1,144,000
Nairobi North	1,062,000
Westlands	247,000
Total	3,138,000

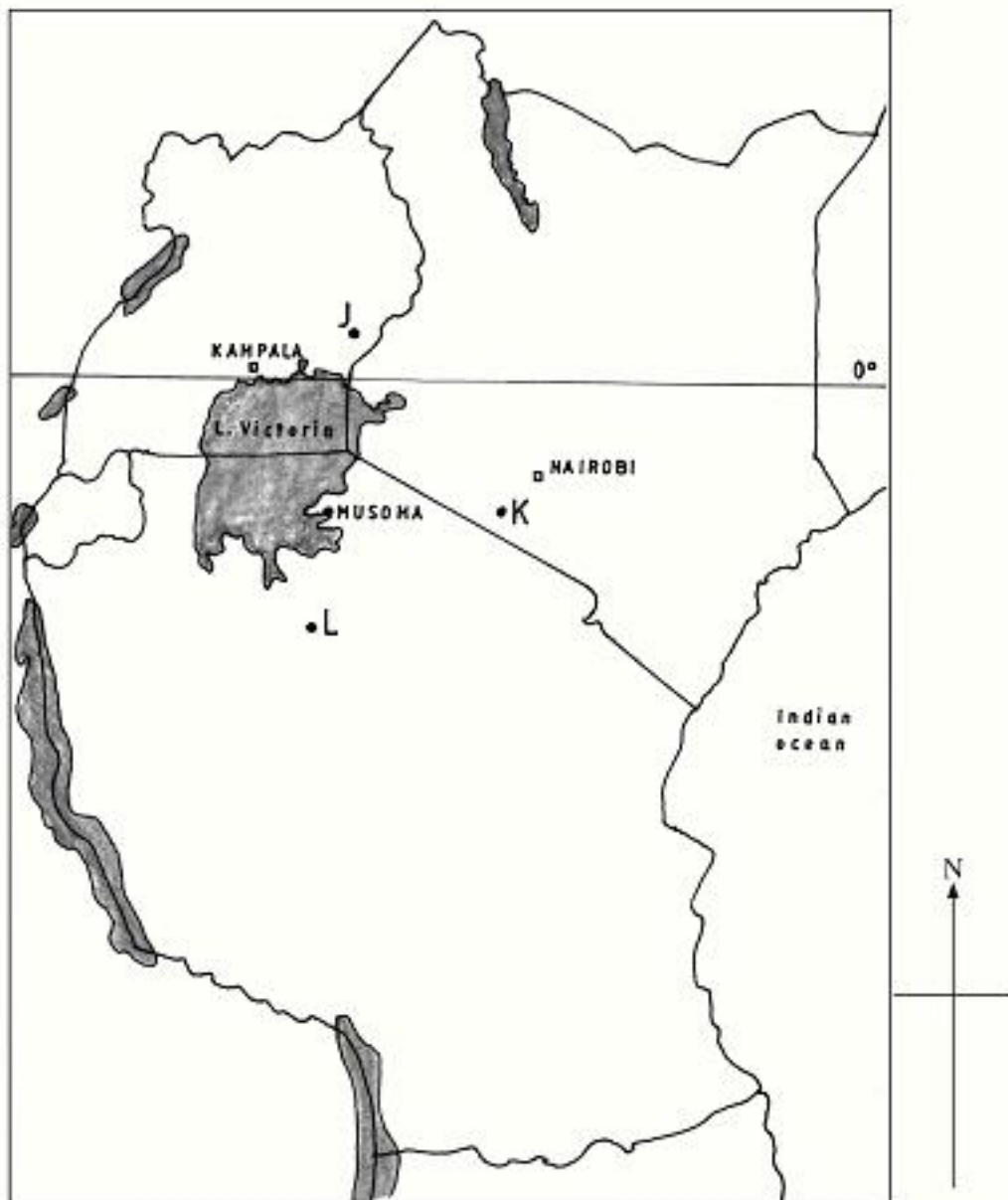
Source: Kenya National Bureau of Statistics.

- (a) (i) Apart from pie charts, name **two** other statistical methods that can be used to represent the data in the table. (2 marks)



- (ii) Using a radius of 5 cm, draw a pie chart to represent the data in the table above. Show your calculations. (9 marks)
- (iii) Calculate the population growth rate of Nairobi over the 10 year period if the population was approximately 2,143,000 in 1999. (2 marks)
- (b) Explain **two** factors that may have led to the large population increase in Nairobi between 1999 and 2009. (4 marks)
- (c) Explain **four** positive effects of low population growth in a country. (8 marks)

7 The map below shows the location of some minerals in East Africa.



- (a) Name the minerals mined in the areas marked **J, K** and **L**. (3 marks)
- (b) Explain how the following factors influence the exploitation of minerals:
- (i) mode of occurrence of minerals; (4 marks)
 - (ii) transport; (4 marks)
 - (iii) level of technology. (4 marks)
- (c) Describe the opencast method of mining. (4 marks)
- (d) Explain **three** benefits of petroleum mining to the economies of Middle East Countries. (6 marks)
- 8**
- (a) (i) What is agriculture? (2 marks)
- (ii) Identify **four** characteristics of Plantation farming in Kenya. (4 marks)
- (b) Give **four** physical factors that influence the growing of tea in Kenya. (4 marks)
- (c) Explain **four** problems facing small scale tea farming in Kenya. (8 marks)
- (d) You plan to carry out a field study in a tea farm.
- (i) Give **four** reasons why you need a route map for the study. (4 marks)
 - (ii) What information are you likely to gather about marketing of processed tea during the study? (3 marks)
- 9**
- (a) Identify **three** sources of renewable energy. (3 marks)
- (b) (i) Name **three** main Hydro Electric Power Stations along the River Tana. (3 marks)
- (ii) Apart from providing electric power, state **four** other benefits of the dams along the River Tana. (4 marks)
- (iii) Identify **two** problems that affect the production of power from the stations along River Tana. (2 marks)



- (c) Explain **four** measures the Government of Kenya has taken to conserve energy. (8 marks)
- (d) Some students carried out a field study on sources of energy by sampling the households around their school.
- (i) Identify **two** sampling techniques the students may have used during the study. (2 marks)
- (ii) Give **three** advantages of sampling the households for the study. (3 marks)
- 10** (a) Differentiate manufacturing industries from tertiary industries. (2 marks)
- (b) Explain why the Government of Kenya encourages the setting up of industries in rural areas. (8 marks)
- (c) Explain **four** factors that have contributed to the development of electronics industry in Japan. (8 marks)
- (d) You intend to carry out a field study in a nearby post office.
- (i) Identify **two** characteristics of a good hypothesis for the study. (2 marks)
- (ii) State **three** advantages of using the interview method to collect data during the study. (3 marks)
- (iii) Give **two** challenges facing postal services that you are likely to find out during the study. (2 marks)

