

NAME: ADM NO: CLASS:
TEACHER.CO.KE
312/2
GEOGRAPHY
PAPER 2
FORM 4
2022
MARKING SCHEME

INSTRUCTIONS:

- This paper has **TWO** sections: A and B.
- Answer all the questions in section A.
- Answer question 6 and any other **TWO** questions from section B.
- All answers must be written on the foolscaps provided.
- Students should check the question paper and ascertain that all the pages are printed as indicated and that no question is missing.
- Students should answer the questions in English.

SECTION A: (25 MARKS)

Answer all questions in this section.

1. (a) What is practical Geography? (2 mks)
 - **This is the study of practical skills which enhance the understanding and interpretation of geographical phenomena.**
- (b) State three practical aspects we study in geography. (3 mks)
 - **Maps and map reading/maps and mapwork**
 - **Photograph work**
 - **Fieldwork**
 - **Statistical methods**
2. (a) Define the term agriculture. (2 mks)
 - **This is the practice of cultivating crops and rearing of livestock for subsistence and commercial purposes.**
- (b) Give three climatic factors which influence agriculture. (3 mks)
 - **Rainfall, moisture or humidity.**
 - **Temperature**
 - **Winds**
3. Outline the advantages of using photographs in learning geography. (5 mks)
 - **Photographs show actual objects as they appear**
 - **Photographs record things/objects in real time**
 - **Photographs can be used to show historical facts and changes that have occurred.**
 - **Unfamiliar features can be seen on photographs and be used in learning.**

- **Photographs may carry a lot of information**
- **Photographs are an attractive and interesting way of learning geography.**

4. (a) What is agro-forestry? (2 mks)

- **A land use system that involves planting of trees, crops and keeping livestock on the same unit of land.**

(b) State three reasons for encouraging agro-forestry in Kenya. (3 mks)

- **To maximize land use**
- **To conserve the land and protect it from erosion/increase water retention on land.**
- **To conserve forests**
- **To provide raw materials for industries**
- **Leaf litter decomposes and adds humus to the soil.**
- **Some trees provide fodder for animals**
- **Trees act as wind breakers and shade for young crop plants.**

5. (a) Identify three factors that influence occurrence of minerals. (3 mks)

- **Vulcanicity**
- **Rock metamorphism**
- **Weathering**
- **Erosion**
- **Evaporation**
- **Deposition**

(b) Give two examples of energy minerals. (2 mks)

- **Coal**
- **Uranium**
- **Petroleum**
- **Natural gas**

SECTION B: (75 MARKS)

Answer question 6 and any other two questions in this section.

6. (a) The table below shows land use in Nairobi county in 2016. Use it to answer the questions that follow.

LAND USE	AREA IN '000Km²
Settlement	110
Grass	30
Horticulture	50
Forest	10
TOTAL	200

- (i) Use the above data to draw a divided rectangle. The length of the rectangle should be 10cm. (10 mks)

$$\text{Settlement} - \frac{110}{200} \times 10 = 5.5\text{cm}$$

$$\text{Grass} - \frac{30}{200} \times 10 = 1.5\text{cm}$$

$$\text{Horticulture} - \frac{50}{200} \times 10 = 2.5\text{cm}$$

$$\text{Forest} - \frac{10}{200} \times 10 = 0.5\text{cm}$$

A DIVIDED RECTANGLE SHOWING LAND USE IN NAIROBI COUNTY IN 2016



- (ii) Analyze and interpret the drawn divided rectangle. (2 mks)
- **Settlement covered more than half of Nairobi area in 2016**
 - **The second largest area was covered by horticultural farming**
 - **Forest covered the least area**
- (iii) State three advantages of using divided rectangles in the presentation of statistical data. (3 mks)
- **Comparison of variables can be made with ease**
 - **A wide range of data can be represented**
 - **Easy to read because of the descending order of the arrangement**
 - **Gives a clear visual impression of individual components**
 - **Easy to draw**
 - **Covers less space.**
- (b) Apart from shaft method of mining, name two other methods of underground mining. (2 mks)
- **Solution method**
 - **Drilling**
 - **Adit/Drift method**
- (c) Explain four problems associated with the shaft method of mining. (8 mks)
- **Sometimes the mines get flooded with underground water which stops mining**
 - **Emissions of poisonous gases may occur in the mines, which is a health hazard to animals, plants and miners/people**
 - **The dust produced through blasting in the mines may cause respiratory diseases**
 - **Underground tunnels may collapse resulting in death of miners.**
7. (a) (i) Define plantation agriculture. (2 mks)
- **This is the specialized cultivation of cash crops in large scale on large tracts of land/estates**
- (ii) Give three characteristics of plantation agriculture. (3 mks)
- **Cover large areas**
 - **Most plantations are owned by foreign companies**
 - **Monoculture is practiced.**
 - **There is Scientific management of activities.**
 - **Requires large capital outlay**
 - **Produce is market oriented**
 - **High yield/production per unit area**
 - **Some farms are labour intensive.**
- (iii) Apart from plantation agriculture, name three other types of farming. (3 mks)
- **Shifting cultivation**
 - **Intensive subsistence agriculture**
 - **Intensive commercial agriculture**
 - **Mixed farming**

- (b) Name five crops in Kenya that are processed to produce vegetable oil. (5 mks)
- **Maize/corn**
 - **Sunflower**
 - **Groundnuts/peanuts**
 - **Coconut**
 - **Cashewnuts**
 - **Simsim**
 - **Soya beans**
 - **Macadamia**
 - **Cotton**

- (c) (i) Name three counties in Kenya where maize is grown in large scale farming. (3 mks)
- **Nakuru**
 - **Uasin Gishu**
 - **Trans-Nzoia**
 - **Laikipia**
 - **Bungoma**
 - **Narok (Trans-Mara)**

- (ii) State four physical conditions that favour maize cultivation in the counties named in (c) (i) above. (4 mks)
- **High temperatures (18 – 30°)**
 - **Moderate to high rainfall**
 - **Well distributed rainfall**
 - **Sunny periods for ripening and harvesting**
 - **Deep, well drained volcanic/Loam soils**
 - **Gently sloping/undulating land**
 - **Frost free conditions.**

- (d) Give five uses of maize. (5 mks)
- **Maize grain is used as human food**
 - **Maize grain is an industrial raw material for:-**
 - (i) **Mize flour milling**
 - (ii) **Alcohol manufacture**
 - (iii) **Corn oil extraction**
 - (iv) **Making animal feed.**
 - **Cobs and stalks are used as animal feed**
 - **Stalks and cobs are used as fuel**
 - **Stalks and cobs are used as manure**

8. (a) Use the map of East Africa below showing the distribution of major minerals to answer the questions that follow.

MAP OF E. AFRICA SHOWING THE DISTRIBUTION OF MAJOR MINERALS



- (a) Name the major minerals mined in the areas marked A – F. (6 mks)
- A - Copper
 - B - Oil
 - C - Trona
 - D - Titanium
 - E - Diamond
 - F - Gold
- (b) Give reasons why coal in Tanzania is under exploited. (5 mks)
- **Inadequate capital to invest in its exploitation**
 - **Low market demand for coal**
 - **Deposits found far in remote areas with poor transport networks**
 - **There are cleaner alternative sources of energy which have been developed**
 - **Poor quality coal/small coal reserves.**
- (c) Explain three negative effects of mining to the environment. (6 mks)
- **Dumping of rock waste leads to loss of biodiversity**
 - **Dereliction of land due to dumping of waste and scars which are an eye sore that destroys the natural beauty of land**
 - **Open scars expose land to soil erosion and soil degeneration**
 - **Pollution by noisy blasts, smoke, dust and water pools that are a health hazard**
 - **Underground mining disrupts/lowers the water table which may lead to water shortage.**

(d) (i) Give the uses of Soda ash.

(3 mks)

- **Used in glass making**
- **Used in making detergents and soaps**
- **For petroleum refining**
- **As a water softener/water treatment**
- **Used in desulphurising steel**
- **For paper smoothing in paper making**
- **In manufacture of textiles**
- **In production of salts.**

(ii) Name five major oil producing countries in Africa.

(5 mks)

- | | |
|----------------------------------|----------------|
| • Libya | Morocco |
| • Tunisia | Gabon |
| • DRC | Egypt |
| • Algeria | Angola |
| • Sudan (North and South) | |
| • Nigeria | |

9. (a) The map of Kenya below shows some forested areas. Name the forest reserves marked a – h.

(8 mks)

MAP OF KENYA SHOWING SOME FORESTED AREAS



- a – Boni/Dodori forest
- b – Arabuko sokoke forest
- c – Mt. Kenya forest
- d – Aberdare forest
- e – Mau forest
- f – Cherangani forest
- g – Kakamega forest
- h – Mt. Elgon forest

(b) (i) State five ways in which clearing of forests has affected the natural environment in Kenya. (5 mks)

- **Reduced water volume in rivers/drying up of some rivers**
- **Has led to changes in rainfall patterns and desertification**
- **Has interfered with environmental beauty**
- **Has disrupted the ecosystem**
- **Has accelerated soil erosion**
- **Destruction of natural habitats for wildlife that has endangered some wildlife species.**

(c) (i) Name three softwood tree species grown in forests of Canada. (3 mks)

- **Spruce**
- **Douglas fir**
- **White pine.**

(ii) Give five characteristics of softwood forests of Canada. (5 mks)

- **Trees are conical**
- **Trees are light in weight**
- **Trees occur in pure stands**
- **Trees are softwoods**
- **Trees are tall and straight**
- **Trees have needle like leaves**
- **Trees bear cones**
- **Forests are ever green**
- **Have little or no undergrowth**
- **Trees have thick waxy barks**
- **Trees have shallow root systems that spread widely**
- **Trees take long to mature due to long cold winters.**

(d) Give the differences between softwood forests in Kenya and Canada under the following sub-headings:-

(i) Period of harvesting. (2 mks)

- **In Canada logging is done in winter and early spring while in Kenya cutting is done throughout the year.**

(ii) Period of growth. (2 mks)

- **In Canada trees take long to mature due to the cold climate while in Kenya trees mature faster due to the warm/tropical conditions.**