

**OPENER EXAMINATION: TERM 2 2024**

**GEOGRAPHY FORM 4**

**MARKING SCHEME**

1. a) Define a mineral. (2 marks)

Is a naturally occurring inorganic or non-living substance with specific physical and chemical properties.

b.) State three benefits of oil mining to the Kenyan economy. (3mks)

- Foreign exchange
- create employment.
- Development of settlements and towns.
- Development of infrastructure -roads, railways and pipelines.

2. a.) What is mining? (2marks)

The process of extracting valuable minerals from the earth's crust.

b. Fill in the table below. (3mks)

Mineral	Country	Area Mined	Mining Method
Diamond	Tanzania		
Soda Ash	Kenya		
Copper	Uganda		

Area Mined

Mining Method

Mwadui

Open cast

Magadi

Dredging

Kilembe

Adit

3.a.) Name two uses of soda ash.

(2mks)

Manufacture of : glass, soap, caustic soda, detergents, paper making industry, textile industry, desulphuring industry.

b.) State three ways in which coal contributes to the economy of Zimbabwe. (3 marks)

Foreign exchange

Employment

Development of industries

Development of transport system

Development of settlement

Uplifting living standards.

4. a.) Give two reasons why hardwood tree species in Kenya are in danger of extinction. (2mks)

Demand for timber and other wood products.

Prolonged drought.

Takes long time to mature.

b.) State three factors that influence exploitation of minerals. (3mks)

Value of the mineral.

size of the deposit

Quality of the ore

transport costs

Capital

Labour

Method of extraction

Political influences

Demand for the material

Skilled and qualified workers.

5. a.) Name two exotic species of trees planted in Kenya. (2mks)

Cypress, Pine, Cedar, Spruce

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b.) State three reasons why it is necessary to carry out afforestation programmes in Kenya. (3mks)

- Continuous supply of wood fuel, timber and raw materials.
- Control soil erosion
- Protect water catchment areas.
- Create room for wildlife conservation.
- Reduce importation of forest products
- Employment
- Promote Scenic beauty.

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## SECTION B

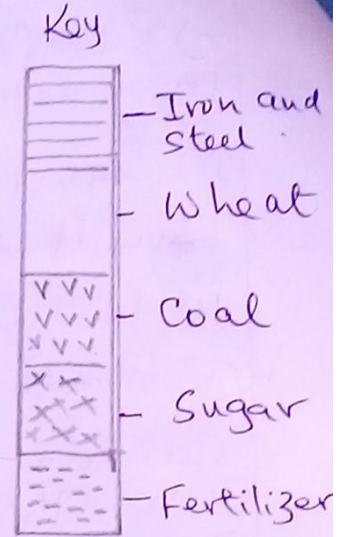
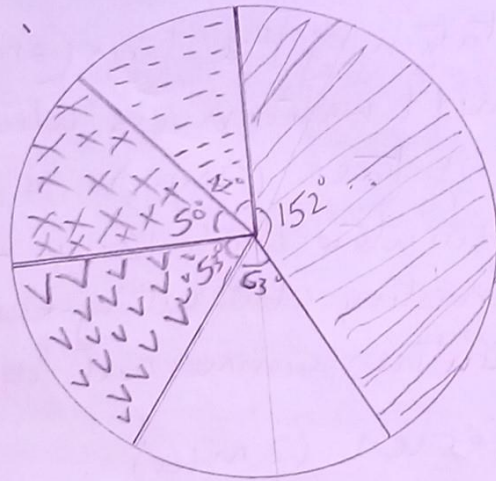
6 Answer Question 6 and any other TWO.

Imports in Tonnes		Exports in Tonnes	
Item	Weight	Item	Weight
Sugar	99,000	Coffee	316,000
Fertilizer	84,000	Maize	259,000
Wheat	125,000	Cement	225,000
Iron and Steel	300,000	Tea	159,000
Coal	105,000	Soda Ash	150,000
Total	713,000		1,109,000

- a. Using the radius of 4cm, draw a pie- chart to represent the data on imports shown in the table above. (10 mks)

# A PIE-CHART SHOWING IMPORTS IN THE PAST.

- N/B: (5 marks)
- Title
  - Key
  - Start with largest
  - shading
  - Neatness (Pie-chart)



## Calculations: (5 marks)

$$\frac{99000}{713000} \times 360 = 50^\circ \text{ (Sugar)}$$

$$\frac{54000}{713000} \times 360 = 42^\circ \text{ (Fertilizer)}$$

$$\frac{125000}{713000} \times 360 = 63^\circ \text{ (Wheat)}$$

$$\frac{300000}{713000} \times 360 = 152^\circ \text{ (Iron and steel)}$$

$$\frac{105000}{713000} \times 360 = 53^\circ \text{ (Coal)}$$

b. Explain why Kenya imports wheat and yet she is a producer of the same commodity. (5 mks)

Adverse weather conditions such as drought or unexpected rains during harvest reduces yields.

Prevalence of pests and diseases lowers wheat products.

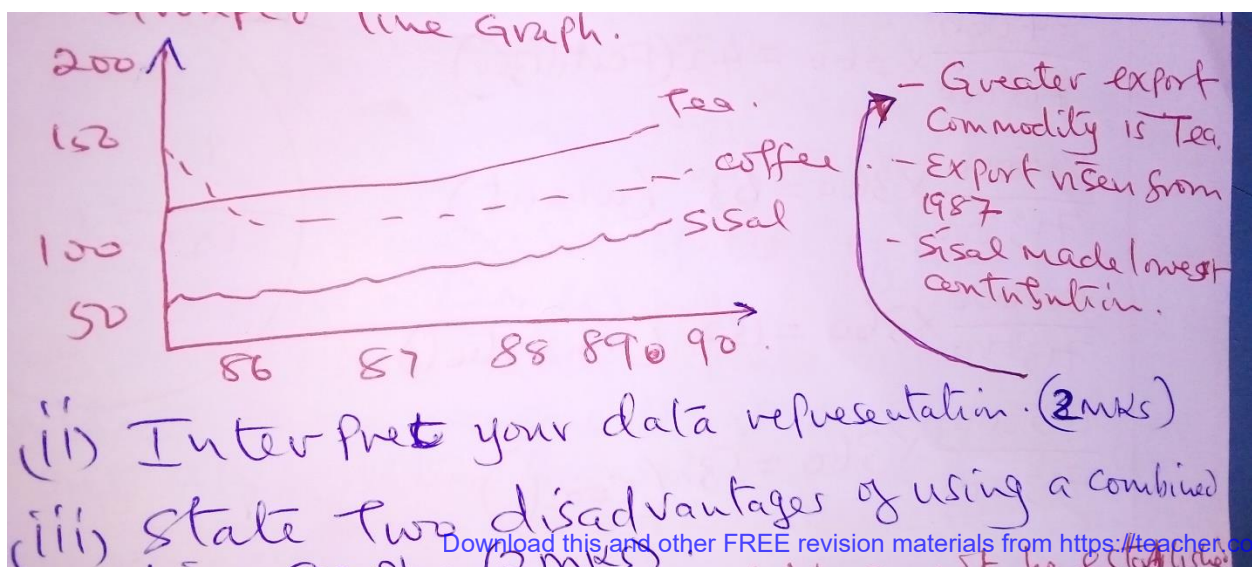
Inadequate finance to purchase farm inputs which lowers yields.

Competition from other farming activities like livestock farming and other crops like maize leads to low yields.

Inadequate storage facilities lead to poor storage hence rotting and hence wastage of wheat.

c. Use the table below to draw a Comparative/ combined/ grouped line graph. (6mks)

Cash crops 000 tonnes	1986	1987	1988	1989	1990
Coffee	126	100	91	98	114
Tea	116	135	138	163	166
Sisal	32	23	31	30	30



(ii) Interpret your data representation. (2mks)

(iii) State two disadvantages of using a combined line graph. (2mks)

ii. Interpret your data representation. (2mks)

- Greater export commodity is Tea.
- Export risen from 1987.
- Sisal made lowest contribution.

iii. State two disadvantages of using a combined line graph. (2mks).

- Total amount of each variable cannot be established at a glance.
- Limited number of variables can be shown.

7. a. i) What is forestry? (2mks)

It is the science of planting, caring and using trees/forests and their associated resources

OR

The practice of managing and using trees and their associated resources.

i.) Explain three factors that favour the growth of natural forests on Mt. Kenya. (6mks)

- High rainfall 1000mm- 2200mm throughout the year encouraging continuous growth of trees.
- Deep fertile volcanic soils.
- The area is gazette reserve prohibiting cultivation and settlement.
- Steep slopes discourage settlements.

iii.) State five factors that have led to the reduction of the area under forests on the slopes of Mt. Kenya.

(5mks)

- Government Policy of degazettement has allowed illegal cultivation and settlement in forest areas.
- Increased population of elephants that destroys trees.
- Prolonged drought.
- Plant diseases and pests
- Outbreak of forest fires
- Over exploitation of certain species of trees.



b.) Explain four measures that the government of Kenya is taking to conserve forests in the country. (8mks).

Afforestation and reforestation

Legislation

Encouraging public participation in conservation

Setting buffer zones (Nyayo Tea Zones)

Creation of forest reserves.

Encouraging agroforestry.

Setting up presidential commission with aim of rehabilitating destroyed forested are

c)give the differences in the exploitation of the softwood forests in Kenya and Canada under the following

i)periods of harvesting 2mks

in Kenya harvesting is done throughout the year

canada –harvesting in summer and early springs

ii)transportation

(2mks)

-Kenya-road

-Canada-water

8.a(i)define the term land dereliction (2mks)

Land which has been abandoned by a mining company after minerals has been exhausted

(ii)name two minerals mined using panning metthed (2mks)

-gold

-platinum

-diamonds

-alluria (placer)

b) describe the following methods of mining;

i) solution methods (5mks)

- mineral is dissolved into water

- super heated water is sunk into deposits of salts potash and sulphur where minerals dissolve in water

- solution is pumped to the surface where it is evaporated and excavated

ii) stripping methods (4mks)

- mineral deposit occurs very close to the earth's surface

- involves removal of top layer covering mineral ore

- if mineral is soft can be removed by digging

- if hard can be loosened by use of explosives and removed by powerful shovels or bulldozers

- examples copper iron and coal

c) i) describe the processing of Gold (5mks)

- mined using underground (shaft)

- after extraction gold is crushed into fine powder and then mixed with solution of sodium cyanide which dissolves gold particles

- cyanide solution then mixed with zinc dust causing precipitation of gold

- gold then molten and moulded into bars

ii) name two areas in south Africa where diamond is mined (2mks)

- fish mine – near postmasburg in SA

- kimberly diamond – orange free state to Transvaal

Bulfontein and Koffiefontein in SA

iii) describe how oil is extracted (5mks)

- Using drilling method. Deposit reached by boring wells. oil or gas brought to the surface under its own pressure or by pumping.

- after drilling oil is refined to extract different products i.e kerosene diesel fuel lubricating oil gasoline etc

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9.a) state four ways in which minerals occur on earth (4mks)



- veins and lodes
- beds and seams (layers)
- weathering products
- alluvial or placer deposit

b) explain four ways in which Gold mining has contributed to the Economy of South Africa (8mks)

- foreign exchange
- employment
- urbanisation due to migration of people seeking employment
- related industries
- infrastructure
- social Ammenities
- trade

c) state three negative effects of mining on the environment (6mks)

- land dereliction
- pollution
- loss of bio diversity –plants and animals
- Soil erotion
- Landslides and mass wasting
- ugliness
- health

d) (i) explain any two factors influencing the type of and distribution of forests (4mks)

- Altitude
- Aspect
- Precipitation
- temperature

-Soil

-Human activity

(ii)state three importance of forests in Kenya

(3mks)

provide fuel charcoal etc

Timber

Gum resins

manufacture of paper plywood soft boars etc

animals from the forest hunted by people for food eg insects birds etc

Tannin (chemical substance)

income

Fruits nuts vegetables

wood carvings etc

