

**MERU CENTRAL SUB COUNTY**

**GEOGRAPHY Paper 2**

**Marking Scheme**

**DEC -2020**

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1. a) Two ways in which minerals occur

- veins / lodes
- beds / seams
- alluvial deposits
- placer deposits
- weathering and leaching products *any 2 x 1 = 2mks*

b) Problems facing soda ash exploitation in Magadi

- located in remote areas with poor transport and communication links
- there is inadequate fresh water supply for use in the factory and domestic purposes
- the area has no permanent inhabitants to provide the factory with reliable labour
- competition from large soda ash mining countries in USA, China and Israel
- low prices in salt has demoralized operators *any 3 x 1 = 3mks*

2. Define Agroforestry

It is a land use system where there is growing of trees and crops on the same piece of land at the same time

b) Reasons why Agroforestry is encouraged in Kenya

- to ensure continuous supply of wood fuel, timber herbal medicine and raw materials for paper making
- reduce importation of forest products
- create employment opportunities
- protect the soil from erosion
- improve the scenic beauty
- to maintain the hydrological cycle *3 x 1 = 3mks*

**3**

. (a) Apart from land pollution, name two other types of environmental hazards

- Wind storms
- Pest and disease
- Lightening
- Floods
- Fire out breaks
- Earthquakes

b) State three ways through which land pollution can be controlled

- Burning waste
- Digging pit for throwing rubbish / waste disposed.
- Educating the public on the effect of land pollution
- Recycling waste materials
- Minimizing use of harmful chemicals

- Legislation against dumping
- Setting up garbage collection/ provision of bins

4.,(a) Apart from a telephone, state two other forms of communication (2mks)

- Internet/computer
- Telex/telex
- Pagers
- Cell phone/mobile phone
- Fibre cable network (2x1=2mks)

(b) Mention three problems facing railway transport in Africa (3mks)

- There is insufficient capital to expand the railway network in some Africa countries
- It is difficult to connect the railway line of one country with another because of different gauges.
- Different ideologies and political instability in some African countries hinder efforts to construct railway lines to link them.
- Many parts of Africa are in productive, it would be uneconomical to construct railway lines.
- There is poor management of the sector leading to many railway lines and train left unserved making the mode of transport unreliable.
- African countries produce similar goods hence there is limited trade between them, this does not warrant construction of railway line.

(3x1=3mks)

5.(a) Apart from the common market for eastern and southern Africa (COMESA) identify two other trading blocks in Africa

- Southern African development community (SADC)
- Economic community of west Africa states (ECOWAS)

b. Give three benefits of (COMESA) to the members states

- Has created a large market for each country
- Has promoted regional peace
- Has led to expansion of industries and agriculture to cater for the wide market
- Has reduced tariffs
- Has expanded market for goods hence promoting industrial development as demand increases

6 (a) (i) Identify the type of photograph above

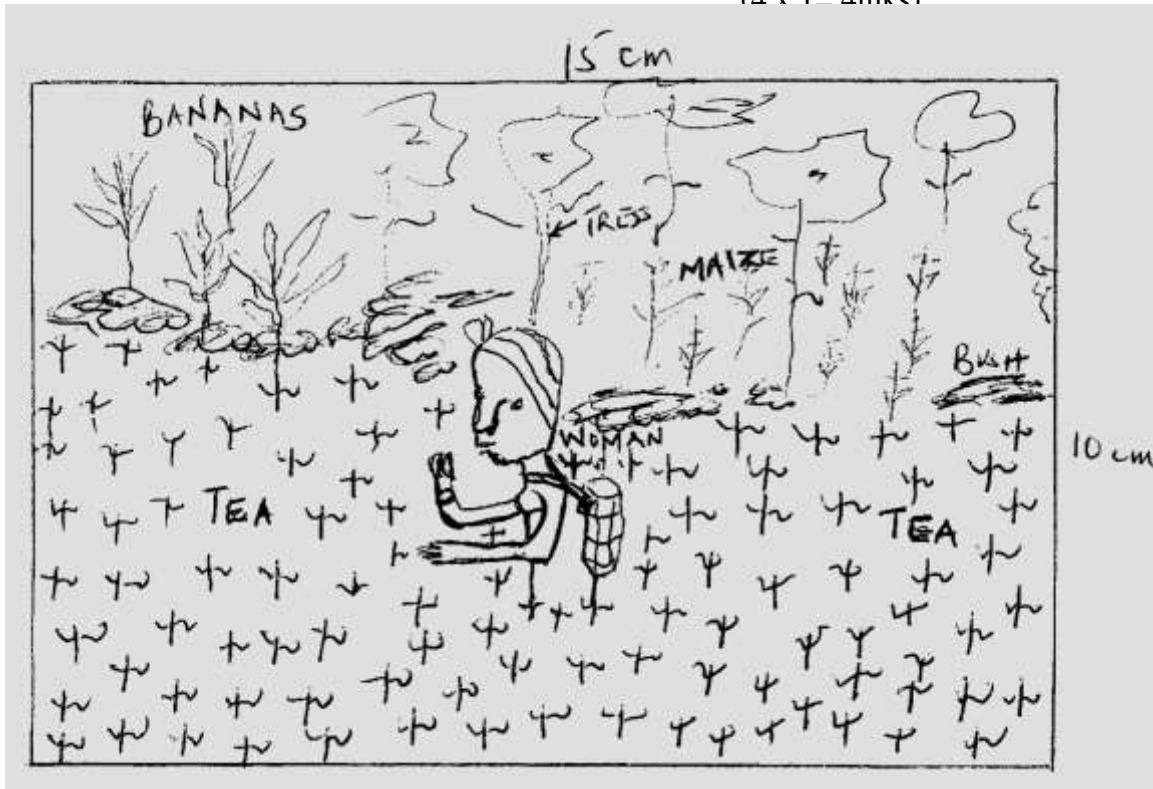
Ground general view

(1 x 1 = 1mk)

(1mk)

(ii) Draw a rectangle measuring 15cm by 10cm to represent the area covered by the photograph (1mk) (1 x 1 = 1mk)

(iii) On the rectangle, sketch and label four main features shown on the photograph (4mks) (4 x 1 = 4mks)



Mixed crop farming (1 x 1 = 1mk)

(ii) Give three physical conditions favouring tea farming in Kenya

- Requires rainfall of about 1500mm per annum/well distributed (3mks)
- Cool to warm temperatures of between 15<sup>o</sup>c – 30<sup>o</sup>c
- Fertile, deep, well drained acidic and well aerated soils/volcanic soils
- It grows well between 1500 – 2200 metres above sea level
- It should be sheltered from strong wind and sunshine (3 x 1 = 3mks)

(iii) Describe the stages of the processing (5mks)

- In the factory, tea leaves are weighed and spread out on long wire trays
- Leaves are dried by blasting warm air from underneath to remove any moisture.
- Leaves are rolled mechanically between steel rollers to break up fibres.
- Chopped leaves are placed in containers for fermentation to reduce tannic acid by half and changing the colour to greenish brown
- Leaves are roasted and dried over fire until they are black in colour
- Leaves are sieved to eliminate stems and other unwanted particles
- The finished product is graded and packed for export. (5 x 1 = 5mks)

(c)(i) State two areas in Kenya where maize is grown on large scale (2mks)

- Uasin Gishu
- Trans-Nzoia

- Nakuru
- Bungoma

(2 x 1 = 2mks)

(ii) Explain four problems facing maize farmers in Kenya (8mks)

- Farm inputs are expensive, reducing farmers profit margins
- The prices in the market keep on fluctuating making it hard for the farmers to plan, or recover their inputs.
- Adverse weather conditions/unfavourable weather/prolonged drought destroy the crop leading to low yields/low income for the farmer.
- Pests and diseases e.g. stalk bores, army worms, aphids, weevils, etc destroy the crop leading to loss for the farmers
- Inadequate storage facilities, hence post harvest losses/low income for the farmers.
- Stiff competition in the market/flooded market with cheap imports from foreign countries.
- Poor transport and communication networks in the growing areas affecting marketing
- Shortage of capital to buy inputs, discouraging farmers

Maize grow encourages monoculture. Soils are easily exhausted and requires regular application of fertilizer/manure making this farming venture expensive.

7.

. a

i)stripping

- hill slope mining

ii)

- vertical shaft is sank to reach the mineral seams or beds
- Horizontal tunnels are dug from the tunnels to reach the mineral bearing rock
- Props are erected to support the roof of the tunnels
- The rocks are blasted with explosion on dug using mechanical shovels and big axes
- Ore is transported on light rails track or conveyer belts to the buses of shaft
- The ore is then braded with a light of cage for costing on the surface

b. negative effect of mining

- Pits left on the lands are ugly
- Dust produced during mining pollute the water or the atmosphere
- Blasting leads to instability on the basement rocks
- Ponds created collects water which is habitant for disease causing vectons and pest
- Loss of biodiversity
- Soil erosion

c)

- It is cheaper than when it is refined
- Kenya exports her refined petroleum products
- Waste from refineries is used in road tarmacking
- There are many by-products when oil is refined

d) Contribution of mining to the economy

- It provides raw materials for manufacturing
- Mining facilitates provision of social amenities eg school and hospitals
- Leads to setting up other related industries
- It is a source of income
- Mining stimulates development of transport opening up remote mineral rich areas

e.i) Technology

- Availability of technical skills and relevant modern machines are important for specialized mining operations.

ii) Quality of the ores

- High quality ores are economical to extract as they yield a large amount of metal / profit
- Low quality ores are rarely extracted as their metal content is very low.

8. a) Global warming

Refers to the increase in heat levels in the lower atmosphere occasionally by presence of green house gases e.g. carbon dioxide which depletes the ozone making it transparent to the incoming ultra-violet rays (UV)

**2mks**

b) Distinguish between environmental conservation and environmental management

- environmental conservation refers to the protection, preservation and proper utilization of the resources in the environment to avoid depletion, wastage or loss while environmental management is the effective planning and control of the process and activities that could cause deterioration of the environment

**2mks**

c) Four reasons why Kenya should conserve her environment

- to sustain life on the earth surface
- to protect the endangered species of both plants and animals
- to maintain the aesthetic value of the environment to preserve cultural heritage
- for careful utilization of natural resources and in a sustainable manner
- to control / curb effect of global warming

**any 4 x 1 = 4mks**

d) Four effects of land pollution to the environment

- the garbage dumped on the land may result in foul smell or air pollution which is hazardous to human health
  - the garbage dumped may be washed into the rivers or following streams causing water pollution
  - accumulation of garbage may result in blockage of foot path, roads and drainage systems
  - the garbage can be a breeding ground for rodents
  - flies and cockroaches which can cause diseases outbreaks
  - heaps of garbage are eyesore because they make the surrounding ugly / unpleasant
- any 4 x 2 = 8mks**

e) Reasons for the following environmental acts

i) The factories Act

- give clear guidelines in the health safety and general welfare of the employees in factories
  - regulate discharge of industrial effluents into water sources before treatment
  - requires that fumes from factories are free of dust and other pollutant emissions
- any 2 x 1 = 2mks**

ii) Water Act

- protects certain water catchment zones against any form of pollution
  - prohibits disposal of wastes into water sources
  - ensures proper conservation and use of water resources
  - initiates and support floods control measures
- 2 x 1 = 2mks**

f) i) Objective to field study on environmental water pollution

- to find out the main pollutants of water in the area of field study
  - to find out the main human activities that cause water pollution
  - to identify the negative effects caused by polluted water to human beings and livestock
  - to determine measure the government has taken to control water pollution in the area of study
- any 1 x 1 = 1mk**

ii) Two reasons why you need to conduct reconnaissance

- to be familiar with the area of study
  - to enable the research to estimate the cost of the study
  - to help the researcher to know possible problems which may be encountered during the study
  - it helps the researcher to prepare a working schedule
- any 2 x 1 = 2mks**

iii) Any two ways to control the environmental problem (water pollution)

- introduce strict laws to curb waste disposal in water bodies
- educating the public on healthy waste disposal
- identify main causes of water pollution **2 x 1 = 2mks**

9.

a) i) Differentiate between population and demography

- population refers to the total number of people inhabiting in a given unit area while demography is the study of the statistical data of human population

ii) State three causes of Rural – rural migration

- Migration to plantations to seek employment
- More in search of water and pasture
- Buying land and settling in the new location
- Increased insecurity in an area

3x1=3mks

b) Explain how the following factors led to the population increase in Kenya

- Migration – political instability in neighbouring countries like Sudan and Somali has led to rise in the number of refugees fleeing to Kenya hence high population increase (2mks)

- Improved medical care – The establishment of more medical facilities training of medical personal and modern advancement in the management and treatment of diseases has drastically reduced the mortality rates this increasing the survival rates of Kenyans / increasing life expectancy of Kenyans

- Cultural beliefs and traditions – some cultures encourage large families due to the preference of one gender to another. Also some communities such as the Maasai have a culture of marrying off their daughters which they are very young thus increasing the number of children they are likely to get in their life time (2mks)

c) Explain three problems which result from a high population growth rate in Kenya

- The government is unable to provide adequate social amenities eg health and educational facilities leading to strain on the amenities

- A high population growth rate creates a problem of land fragmentation This leads to an increase in squatters and low agricultural yields

- Large number of youthful population creates a high dependency ratio which cause slow economic growth

- More land is used in the production of food crops to feed the high population at the expense of cash crops hence reducing the country's foreigner exchange

- High population in urban areas has put a strain in transport facilities leading to congregation and traffic jams

3x2= 6mks

d) Explain three ways in which the population of Kenya differs from that of Sweden

Kenya	Sweden
- Kenya has a high birthday rate	-has a low birth late
- The death rate is relatively high	- Death rate is low
- Kenya has a large number of young people below 20years of age	- Sweden has a large population of mature and ageing population
- The population of Kenya has a life expectancy	- Population of Sweden has a high level expectancy



- Population growth rate in Kenya is high	- Population growth rate in Sweden is low
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10.(a) (i) Identify the fishing grounds marked Q, S and W (3mks)

Q – South East Pacific Fishing Grounds

S – South East Atlantic/Namibian Coast

W – North West Pacific

(ii) three physical conditions favouring fishing activities in the area marked R/North West Atlantic fishing grounds (6mks)

- The cold Labrador currents and the warm Gulf Stream currents converge in this area creating cool water ideal for plankton growth food for fish.
- The area is located between latitudes  $45^{\circ}$  and  $55^{\circ}$ N of equator where climate is cool, ideal for fishing, preservation and storage of fish.
- Presence of irregular coastline with broad and shallow continental shelf provide ideal sites for fish breeding
- The countries found in the area, have rugged landscape and short growing season, hindering agricultural activities. Fishing is an alternative source of income and food.
- Presence of large tracts of temperate forests ensuring regular supply of materials for ship building/packaging materials/preservation of fish promoting fishing activities.

(3 x 2 = 6mks)

(b)(i) Give two methods of fish preservation (2mks)

- Refrigeration
- Salting
- Smoking/roasting
- Sun drying
- Canning
- Pickling

(ii) Describe trawling fishing method (5mks)

- The method is used to catch demersal fish found close to the bottom of the sea
- It involves pulling of a net by a boat/ship
- A bag shaped net is attached to a boat called Trawler
- The mouth of the net is kept open using otter boards
- The upper part of mouth of net has floats and weights at the bottom, to keep part of the net at the sea bed
- Each end of net is attached to the boat
- The net is cast to the waters and the ship/trawler drags the net along the sea bed
- After sufficient fish has been caught, the net is hauled to the trawler, to empty the fish.

(c) (i) Give three reasons why the government of Kenya encourages fish farming

(3mks)



- Fish farming occupies less space compared to other agricultural activities
- Fish provides protein rich food for the population
- The industries creates many job opportunities for many people improving their living standards
- It has encouraged development of fish related industries, hence industrialization of the country
- Some fish products are exported earning foreign exchange
- Unlike marine fishing, fish farming is free from inter-territorial conflicts and disputes.

(3 x 1 = 3mks)

(ii) Explain three human factors that make Japan to be a leading fishing nation in the world

(6mks)

- High technology e.g. large ship with refrigeration and processing facilities which enable them to go for deep sea fishing
- Large market for fish in the country and neighbouring and countries
- Fish farming is carried in fresh waters and reservoirs, which are scientifically managed for maximum returns.
- Fish marketing is done through co-operatives which advance loans to fishermen to improve and expand their fishing

(3 x 2 = 6mks)

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