**TERM 2-2022**

**GEOGRAPHY (MARKING SCHEME)**

**FORM 4**

**TIME 2¾ HOURS**

**PAPER 2**

Name………………………………………………………………… Adm No………………………………..

School…………………………………………………………………. Class…………………………………….

Signature……………………………………………………………….. Date………………………………………

**1. (a) Name two types of fish caught from lake victoria**

- Tilapia

- Dagaa (omena)

- Herring

- Nile perch (mbuta) *(first 2 x 1= 2mks)*

**(b) State three reasons why fish farming should be encouraged in Kenya**

- It allows better use of land and water resources

- It creates employment opportunities

- It contributes immensely to the supply of animal protein

- Some of the fish from the ponds e.g. trout are exported to earn foreign exchange

- The activity can lead to the development of the related industries eg fish processing, fertilisers, manufacturing. boat construction and net making

- It is free from international conflicts and disputes

- It occupies less space compared to other activities such as livestock keeping

- It assists in the conservation of fish

- It encourages research on fish  *(first 3 x 1 = 3mks)*

**2. (a) State three physical conditions that favour wheat cultivation in Kenya**

- Moderate rainfall (500mm to 1270mm) to enhance the growth of wheat

- Temperatures ranging (from 150c to 200c) warm condition to facilitate growth /maturity of wheat

- A warm /dry/sunny spell for ripening and harvesting

- Deep well drained volocanic sustain high production

- Gently sloping /undulating landscape to allow proper drainage /mechanised cultivation *(first 3 x 1 = 3mks)*

**(b) Name two provinces where wheat is grown on large scale in Canada**

- Alberta

- Manitoba

- Saskatchewan *(first 2 x 1 = 2mks)*

**3 (a) What is urbanisation**

- It is the process through which an increasing proportion of a country’s population is concentrated in towns. It also refers to growth of towns in number and size/process by which population is transferred from rural based agricultural life style to urban based life style *1mk*

**(b) State four factors which have led to the development of Mombasa as a major sea port in the region**

- The port is well linked to its hinterland by a railway line, road and air

- Mombasa serves a very large hinterland including the whole of Kenya, East Africa and other countries like Rwanda, Burudi and Zambia

- The island has a deep and broad harbour (Kilindi) for anchoring ship

- It has many tourist sites (beaches, historical sites, coral reersetc) with high class tourist hotels that attracts tourists

- Its strategic position allows to ships salling between Europe and Asia to anchor. This enchances trade in the area

- It has modern port equipment /creation of container terminal *(First 4 x 1 = 4mks)*

**4 (a) Differentiate between land reclamation and land rehabilitation**

- Land reclamation is the process by which unproductive land such as a desert or a swamp is converted into an agriculturally productive state while land rehabilitation refers to the process of restoring land that was originally productive to its former useful condition

*2mks*

**(b) State three factors that influenced the establishment of Perkerra irrigination scheme**

- The presence of sufficient water from river perkerrathrough out the year

- Availability of an extensive and gently sloping land that allows the natural flow of water to the fields by gravity

- There was need to control the devastating seasonal flooding of river perkerra that originates from Tugen hills and to utilise the excess water instead of it going to waste

- The deep clays that are deposited by the flooding river are suitable for the growth of a variety of crops like onions, pawpaw etc

- Low and unevenly distributed rainfall could not support agriculture thus the need for irrigation for improved productivity of the area throughout the year *(First 2 1x = 2mks*)

**(5a) List two forms of telecommunications services in Kenya**

- Land line /mobile phone services

- Telex services

- Telegraphic

- Paging

- Radio /TV communication *(First 2 x 1 = 2mks)*

**(b) State three ways in which Kenya would benefit from construction of standard gauge railway**

- It will lead to development of towns

- It is a faster mode of transport /efficiency in transport

- It will help to handle bulk goods with ease

- It will lead to increase in trade between East African countries

- It is an efficient mode of transport

- It will offer employment opportunities to many *(First 3 x 1 = 3mks*

**SECTION B**

**Answer question 6(compulsory) and any other two questions in this section**

6. Use the data below to answer questions that follow

Kenya’s Export crop (1986-1989) in tones

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year/crop** | **1986** | **1987** | **1988** | **1989** |
| Coffee | 12.6 | 10.0 | 9.1 | 9.8 |
| Tea | 11.6 | 13.5 | 13.8 | 16.3 |
| Sisal | 3.2 | 2.8 | 3.1 | 3.3 |

(a)(i) Total tones exported from Kenya between 1986-1989

Coffee = 12.6+10+9.1+9.8 = 41.5

Tea =11.6+13.5+13.8+16.3= 55.2

Sisal= 3.2+2.8+3.1+3.3 = 12.4

**Total 109.1 Tones (2 marks)**

(ii) Draw a compound bar graph to represent Kenya Export (1986-1989) (8marks) (Scale 1 cm ref 5 tones)



(iii) ***Advantages of using compound bar graphs to represent data***

* Different variables can be represented on one bar
* Total of component for individual years are clearly brought out
* They present a clear comparison of production quantities within a year (2 marks)

**b) Describe the stages involved in coffee production from picking to marketing. (8mks)**

* The ripe /deep red berries are picked by hand. The harvested berries are carried in baskets/sacks to the factory. the berries are sorted out to remove the outer / diseased berries. The different grades are weighed.

-Berries go through a machine that removes the outer covering /pulp. The beans are washed and then sun dried for about a week. The husks are removed and the beans winnowed. The beans are sorted out and graded according to size and quality. The beans are roasted at temperatures of about 100c. the beans are ground into powder readily for sale.

* **Nb the sequence should be followed.**

**c) i) A part from being a beverage, state any other use of coffee. (1mk)**

* Coffees husks are used as fuel.
* Coffee’s husks are used as manure on the farm

**ii) Explain 2 significance of coffee industry to the Kenyan economy. (4mks)**

* Sources of employment.
* It has led to development of infrastructure.
* Earns our country foreign exchange.

**Any 2x2=4mks**

7. **(a)(i) Types of minerals**

-Metallic

-Non-metallic

-Energy minerals ***(Any 3 x 1 = 3mks)***

**(ii) Occurrence of minerals**

-Veins and lodes

-Beds and seams

-Alluvial deposits

-Weathering products ***(Any 3 x 1 = 3mks)***

**(b) (i) Shaft mining method**

-A vertical shaft is sunk /dug.

-Horizontal tunnels are dug

-Props are used to support the roof of the horizontal tunnel.

-Light railway line/conveyer belt is laid along the floor of the horizontal tunnel.

-Mineral ores are blasted.

-Cages/cranes are used to transport the ores to the earth’s surface***. (5x1=5mks)***

**Nb: sequence must be followed to score**

**(ii) Challenges faced by shaft miners**

-Sometimes mines get flooded with subterranean water.

-There are occasional emissions of poisonous gases in the mines.

-The dust produced causes respiratory diseases.

-Sometimes tunnels collapse causing death of miners. ***(Any 3 x 1 = 3mks)***

**(c) Problems facing the mining industry in Kenya**

-Some minerals are found in remote/inaccessible areas which make them difficult/exploitation.

-Pollution of the areas by noise/blasts/smoke/waterproofs is all health hazards.

-The country faces shortage/inadequate capital for exploitation.

-Shortage of skilled personnel hence country relies on expatriates who remit their salaries and dividends to their foreign countries.

-Land use conflict e.g. Titanium mining in Kwale between Tiomin Company and the local people delays/hinders mining. ***(Any 4x 1 = 4mks)***

**(d) Reclamation of mining derelicts**

-Planting trees

-Creating a park to attract tourists

-Introducing for settlement/farming

-Refilling the holes. ***(Any 3 x 1 = 3mks)***

8. **Apart from water and air pollution, name two other types of pollution.**

* Land pollution / soil ground
* Noise pollution / sound
* Thermal pollution
* Radiation

***(Any 2x1=2)***

(ii) **Identify three ways through which water is polluted.**

* Discharge of industrial waste / oil spillage / radio active waste into water bodies
* Disposal of domestic waste into water bodies
* Discharge of agriculture chemicals into rivers / lakes by rain water
* Abuse of water bodies by human beings
* Natural causes e.g. soil erosion/ terrestrial gas

***(Any 3x1=3)***

(iii) **Explain three effects of air pollution on the environment.**

* Gases emitted from some factories contain substances which corrode roots of houses and metal structures.
* Some gases from factories contain substances which dissolve in water to form acid which makes plant maim or kill animals.
* Inhalation for smoke and soot particles/ bad smell lead to discomfort / irritation of the respiratory system / discoloring of vegetable / building.
* Gases emitted from factories may contain poisonous substance which can lead to poor health / death when inhaled / plant leaves turn yellow.
* Gases/excess carbon dioxide increases the temperature affecting the climate of the affected areas / depletion of O-zone layer.
* Smoke / dust / smog reduces visibility which may lead to motor accidents.
* Dust particles that settles on leaves inhibits photosynthesis.

***Any 3 x 2 = 6mks***

**(b) (i) Explain three factors that lead to frequent flooding in the lake region of Kenya.**

* Most of the land is low lying which causes the rain water to spread over wide area.
* The adjacent highlands receive torrential rainfall which releases large volumes of water resulting to rivers overflowing their banks.
* Silt has filled the river beds making them shallow thus spilling their water over banks.
* The rivers are at their old stage, thus they have wide flood plains which allows water to spread over large areas.
* The area has black cotton soil which is non-porous and when soaks up allow water to flow and spread on the surface.
* The heavy rainfall received in the area is discharged into Lake Victoria making its level to rise thus flooding the adjacent lowlands.

***Any 3 x 2 = 6mks***

**(ii) Explain two ways through which floods are controlled in the Lake region of Kenya.**

* Dams have been constructed across the rivers to check their velocity thus reducing the incident of flooding.
* Several dykes have been constructed / artificial levees to restrict the rivers within their channels/diversion channels have been constructed in the flood plain and water used for irrigation thus reducing the effect of the excess water.

***Any 2 x 2 = 4mk***

(c) **State four effects of wind as an environmental hazard in Kenya.**

* Strong winds destroy trees
* Winds blow off roots of houses
* Winds cause strong sea storms and lead to boats capsizing / communication lines are destroyed / destruction of transport lines.
* Winds cause soil erosion.
* Winds spread air-borne diseases

***Any 4x1=4mks***

**9. a. Describe the characteristics of the population represented by the pyramid. (8 marks)**

**-** From 0 - 14 years the population density is low.

- From 15 - 44 years, the population density is high.

- The ageing population is small.

- The productive group of the population is large.

- The production has a high life expectancy.

- The dependency ratio is low.

-The population has a high birth rate

- The population has a low death rate.

- The population of males and females are almost equal at all levels.

***Any 8x1=8***

**b. Apart from migration, explain four factors that influence population growth and structure.**

**(8 marks)**

**-** Fertility - It is the total number of births that a woman would have 15 and 49 years . If the fertility rate is high, the more the number of children and vice versa.

- Mortality - Refers to number of deaths among members in a given population. High mortality rate reduces or stagnates the population growth.

- Cultural beliefs - Like sex preferences make a couple who have given birth to girls to continue getting more children while looking for a baby boy.

- Early marriage - A girl marrying at an early age is likely to give birth to more children in her lifetime than one who gets married at a later age.

- Health services - Establishment of better medical facilities and improvement in hygiene have reduced the mortality rate resulting to population growth.

- Availability of food - Availability of enough food make people healthy, hence prolonging their life

- Modernization - Provision of better social amenities such as school and clean water have improved

people’s living standards, which account for decline in the death rate

***Any 8x1=8***

**c. State two positive effects of population growth and structure. (2 marks)**

- A large population provides a large manpower resource.

- increased demand for consumer goods and services which, stimulates agricultural, industrial

development and exploitation of natural resources.

- Pressing needs associated with a high population lead to technological innovation.

***Any 2x1=2***

**d. i. Give five problems that could arise from overpopulation. (5 marks)**

- Under development

- Unemployment

- Poor housing and health facilities.

- Over utilization of agricultural and natural resources.

- Slow industrial growth.

- Reduction in cash crops

- Gross domestic product i.e., the per capital income per person becomes low.

***Any 5x1=5***

**ii. Name two sources of population data. (2 marks)**

- Census reports

- text books

- magazines

- periodicals

- Statistical abstracts.

***Any 2x1=2***

10. **.(a) (i) What is energy? (1mk)**

**Energy** is the source of the power used to do work.

***(1x1=1)***

**(ii) Three renewable sources of energy. (3mks)**

-Solar/Sun

-Water

-Geothermal steam

-Wind

-Biomass

***Any 3x1=3***

**(b) (i) Four factor that led to the implementation of the seven forks dam project in Kenya. (4mks)**

-Presence of Tana River/the large volume of water.

-Hard basement rock suitable for dam construction.

-Presence of deep, narrow valley to minimise cost of constructing dam.

-Presence of rapid/waterfalls to provide hydraulic force

-high demand for electricity

-Sparse population in the area to lower cost of resettlement

***Any 4x1=4***

**(ii) Three benefits of seven forks Dam to the economy of Kenya. (6mks)**

-Provision of water – the reservoirs formed behind the dams have provided water for domestic use/irrigation

-The dams act as bridges across the rivers which promotes road transport

-Tourism – the dams have created a beautiful scenery which attracts tourists. This earns the country foreign exchange.

-Employment – many people are employed in the generation of hydro-electric power thus raising their living standards

***Any 3x2=6***

**(c) (i) Two countries in Eastern Africa where crude oil has been discovered. (2mks)**

-Uganda

-Kenya

***Any 2x1=2***

**(ii) Mode of formation of crude oil. (4mks)**

-Forms from remains of many small creatures that lived in shallow lagoons about 100-200 million years ago.

-The decaying remains of these creatures mixed with mud at the bottom as sediments.

-Over the years theses sediments piled on each other and slowly transformed into sedimentary rocks.

-Gradually the animal remains were converted into oil and gas.

***Sequence to be followed to score.***

**(d) Five reasons why Kenya is investing in the development of renewable sources of energy. (5mks)**

**-**To reduce the cost of energy

-To save on foreign exchange used to import crude oil.

-To promote development of industries due to availability of cheap sources of power.

-To reduce air pollution caused by use of petroleum.

-To make the country self-reliant on her energy requirements.

***Any 5x1=5***