312/2

GEOGRAPHY PAPER 2

FORM FOUR EXAMINATION

JULY/AUGUST 2024

Instructions: This paper contains two section A and B

Answer all questions in section A and any two questions from section B

1. (a) i) Apart from geothermal power, name three other renewable sources of energy in Kenya

- ✓ **Wind**
- ✓ **Solar/sun**
- ✓ **Wood**
- ✓ **Biogas.   (3×1=3mks)**

ii. State two factors that limit exploitation of geothermal power in Kenya
- ✓ **Inadequate/shortage of capital to invest in geothermal power production**
- ✓ **Shortage of skilled labor to install the geothermal power**
- ✓ **Low level of technology which hinders exploitation of energy (2×1=2mks)**

2. (a) . Give **four** advantages of air transport over water transport.
- ✓ **Air transport is faster**
- ✓ **Air transport is less affected by congestion**
- ✓ **Air transport is easier in transporting perishable goods**
- ✓ **Air transport is most comfortable over long distances.**
- ✓ **Air transport allows access to remote areas.**
     (4×1 = 4 mks

(b.) Name three types of communication.
- • **Oral/verbal communication**
- • **Written communication**
- • **Visual/audio communication**
- • **Sign language.   (3×1 =3mks)**

3 (a)   Name two tourist attraction found in Kenyan Rift Valley**.**
  - **Lakes e.g Nakuru, Baringo, Naivasha, Elementaita.**
  - **Flamingoes / birds.**
  - **People's culture.**
  - **Mining sites e.g Kariandusi.**
  - **Nakuru National park.**

- Hot springs / geysers / fumaroles / geothermal.
- Menengai crater.
- Water falls – Thomson falls.
- Wildlife.
- Pre-historic sites e.g Kapenguria.
- Sport tourism e.g sport fishing, marathon. (2 x 1 = 2 Marks)

(b) <u>State three factors that hinder domestic tourism in Kenya</u>.
- Negative attitude towards local tourism by the citizens.
- High cost of accommodation in the lodges and hotels discourages many people.
- Poor transport and communication network of roads leading to the parks and other attractive sites.
- Preferential treatment gives to the foreign tourists discourage locals.
- Inadequate knowledge on the tourist attractive sites
(3×1=3mks)

4.(a) What are floods?
- Floods are unusual/excessive covering of an area by water, through a temporary rise in the level of river, lake, sea or rain. **(2Marks)**

(b) **Mention two advantages of farrow irrigation**.

- Furrows can be repaired when they become eroded.
- Weeds grows in the furrows are constantly removed.
(2 x 1 = 2 Marks)

(c) **Name one river which causes large scale flooding in Kenya**

- River Tana
- River Yala
- River Nyando
- River EwasoNyiro
- River Nzoia
- River Kuja   **(1x 1 = 1Mark)**

5. **(ii) Name two major imports from Europe to Kenya**

- Machinery
- Capital equipment
- Pharmaceutical products/medicine
- Fertilizers
- Automobiles(**2×1=2Marks)**

(b) State three factors that influence internal trade in Kenya

- Population size
- Cultural differences
- Production of similar goods for trade by different regions.
- Level of development of transport network:
- Level of income or purchasing power.
- Security:
  (**3×1=3mks)**

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

6. **The table below shows total number of livestock in Kenya in 2012**

Type of livestock	Number in millions

Dairy cattle	2.4
Sheep	7.0
Goats	7.2
Pigs	8.5
Total	25.1

Source: Central Bureau of Statistics

(a) Draw a divided rectangle 15 cm to represent the data give above (7Mark)
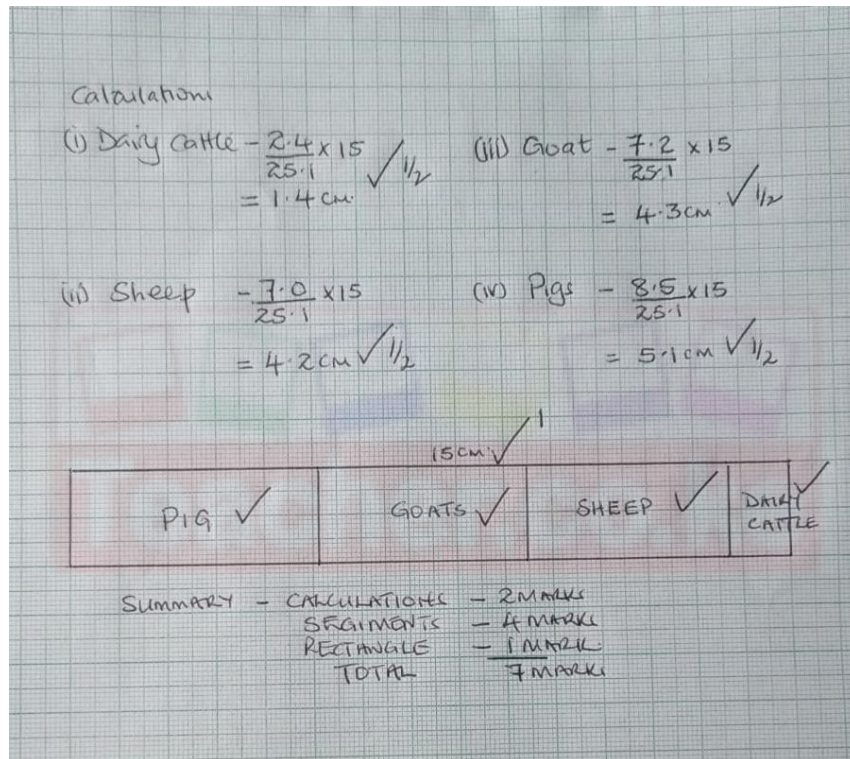
(b) **Give two reason why the population of sheep is higher than that of dairy cattle**
- Sheep survive in a variety of climatic conditions while dairy cattle are restricted to cool and wet climate
- The farm inputs required for dairy cattle are more expensive than those for sheep
- Some breeds of sheep are more resistant to diseases that dairy cattle thus they are more widespread.
- The management of dairy cattle is more demanding than that of sheep
(2 x 2 = 4Marks)

(c). Explain three factors that favour beef farming in Argentina.

- Replacement of coarse grasses with alfalfa and corn has improved the quality of pastures of the beef cattle.
- Crossbreeding of traditional with higher quality breeds/ Hereford Aberdeen
- Angus shorthorn has improved the quality of the yields
- The maritime climate of the area makes grazing of cattle possible throughout the Year
- Availability of water supplied using wind pumps ensures constant supply of water for cattle
- Availability of vast lands suitable for cattle grazing encourages beef ranching
- Availability of market both local and external encourages the farmers to expand the beef industry/ sustains the industry.
- Availability of refrigeration facilities enables beef to reach far off markets in good condition.
   (3×2=6Marks)

(b) Explain four ways in which the government of Kenya assist nomadic pastoralist to improve the quality of their livestock

- The government has set up demonstrations ranches to educate the pastoralists on better ways of keeping livestock cattle dips have been constructed to control pests
- Extension services are provided to give advice to the pastoralists
- Boreholes and dams have been constructed to provide water for their livestock
- Roads have been constructed to enable the pastoralists to transport their produce to markets
- Through formal education, the pastoralists have learnt the advantage of keeping manageable sizes of herds
- The government encourages ranching to enable the pastoralists to view livestock Keeping as a commercial undertaking
   (4×2=8mks)

7. (a) (i) What is rural settlement?   (2 marks)
- These are human habitats that consists of villages and homesteads and people mainly engage in extractive / primary activities**. (2 Marks)**

(ii)State three characteristics of rural settlements.
- Consist of homestead and villages.
- Dormant activities are extractive/primary activities.
- Found mainly in the country sides.
- Agriculture is their main source of occupation**.**
   (3 X 1 = 3Marks)

(b) Explain three factors that led to the growth of Kisumu City

- Its location at the shores of Lake Victoria led to its growth as a lake port handling trade among the three East African countries.
- In 1901 Kisumu became a terminus for the Uganda railway allowing the influx and settlement of early Asian traders. This led to commercial development of the town.
- Kisumu was a regional administrative centre during the colonial period. This led to setting up of administrative offices and other infrastructural facilities.
- The rich hinterland with mineral/agricultural resources provided raw materials for the development of industries/food supply for the town residents.
- The high population in the surrounding areas provided the required labour force for the development of industries.
- The nearby rivers and Lake Victoria provided fresh water for industrial/domestic use.
- The well-developed means of transport/road/ railway/ airport made the town easily accessible from other parts of the country.
  (3×2=6Marks)

(c) **Explain how the following problems facing Kisumu can be solved.**
  (i) **Pollution**
- Disposal of garbage can be improved by providing proper materials for collection
- Regular collection of garbage to avoid heaping wastes.
- Regular dredging of sewerage and drainage system to avoid stagnant water.
- Enacting enforcing laws on environmental management/charging `those found contravening the laws.
- Treatment of effluents from industries before disposal
- Educating the members of the public on dangers of pollution/ on the appropriate ways of refuse disposal to avoid polluting the environment
- Recycling of waste materials to minimize waste on the environment.
  (1×2=2Marks)

  (ii) **Crime**
- Encouraging community policing to complement the effort of the police force.
- Controlling the influx of illegal arms in order to reduce the incidents of thuggery.
- Enforcing laws without favour to provide protection to the law abiding citizens.
- Getting rid of street families to reduce the number of idlers in the towns.
  Creation of more job opportunities to reduce the number of idlers.
  (1×2=2Marks)

  (iii) **Unemployment**
- Expanding and establishing more industries
- Encouraging and enabling people to be self-employed.
  Reviving the collapsed industries to offer more employment opportunities.
   (1×2=2Marks)

(d) **Explain four ways in which Rotterdam port differs from Mombasa port (8 marks)**
- Rotterdam has expanded to a new port hence handle large amount of cargo while Mombasa has had little expansion thus handle less cargo.

- Rotterdam uses advanced technology to provide services while Mombasa has limited expansion in technology hence provision of services are slow.
- Rotterdam is connected to the hinterland by railway road, pipeline, air and rivers and canals while Mombasa is connected by road, railway, air and pipeline only.
- Imports passing through Rotterdam are fuels, minerals, agricultural products while Mombasa imports are manufactured goods, petroleum and chemicals.
- Main exports in Rotterdam are manufacture goods and chemicals while at Mombasa exports are minerals and agricultural products.
- Rotterdam serves rich developed and industrialized hinterland while Mombasa serves developing and agricultural hinterland.
  (4 x 2 = 8 marks)

8 a) i). Differentiate between indigenous and exotic forests.
- Indigenous forests is a forest that is made up of trees which are native/natural to a country/region while exotic forest is a forest that is composed of trees that are alien to a country. (**2Marks**)

ii). Give two exotic hardwood tree species found in Kenya
- Eucalyptus
- Camphor
- Olive
- Iron wood **(2 x 1 = 2Marks)**

iii). State four factors that lead to depletion of forests in Kenya.
- The government policy of degazetement has allowed illegal cultivation and settlement in forest areas.
- Increased population of elephants that destroy trees
- Prolonged droughts have caused drying up of some trees.
- Plant diseases and pests destroy parts of forests.
- Over exploitation of certain species of trees
  (4×1=4Marks)

b). Explain three factors that favour the growth of natural forests on the slopes of Mt. Kenya
- The area receives high rainfall/1000 mm-2200mm throughout the year which
- encourages continuous growth of trees.
- The area has deep fertile volcanic soil that allow the roots for penetration deep into the ground support trees.
- The area is a gazetted reserve prohibiting cultivation and settlement hence allowing growth of trees.
- The steep slopes discourage settlement thus forests thrive.
  (3×2=6Marks)

c). **Compare forestry in Kenya and Canada under the following headings;**

i). Mode of exploitation In Kenya workers are transported to the logging sites daily while in Canada logging involves setting up a settlement for workers within a region to be harvested**. (2Marks)**

ii). Transport

In Kenya transportation is mainly by road transport while in Canada transport is mainly by water transport. **(2Marks)**

d). i). State three factors favouring the development of softwood forests in Canada
- Cool to cold climate favours the growth of coniferous trees
- Rugged landscape and steep slopes discourages agriculture and settlement hence forests stablish themselves naturally
- Canada has a low population density hence a lot of land for forestry
- Presence of heavy rainfall on the windward slopes of mtn ranges supports tree growth **(3 x 1 =3 Marks)**

ii). Give four measures used to conserve forests in Kenya. **(4mks)**
- Mature trees felled are replaced immediately.
- Tree farming is practiced in many parts with the aim of raising trees for future use.
- Regions which previously were devoid of trees are being planted with trees
- People are now being encouraged to plant trees and food crops in the same farms.
- The reduction of wastage e.g. the use of waste paper to produce newsprint.
- People are required to seek permits if they have to cut trees. This reduces the rate of trees felling/unlicensed people do not cut down trees.
- The forest reserves are patrolled by guards to ensure that fires are reported promptly and also to ensure unlicensed people do not cut down trees.
- Forest reserves have been set aside to conserve indigenous species.
- Forestry department of the ministry of natural resources carry out research to produce and distribute seedlings to ensure the extension of forests.
- People are being educated through mass media on the importance of trees

9.a)i) <u>Methods of land reclamation</u>
- Irrigation
- Tsetse fly control
- Planting of trees / afforestation
- Flood control   (2 × 1 = 2 marks)

ii)<u>Methods of swamp drainage</u>
- Construction of drainage pipes.

- Digging open ditches / canals.
- Pumping out water.   (2 × 1 = 2 marks)

b)   i)   <u>Two rivers that supply water to Mwea</u>
- Thiba River
- Nyamindi river
- Murubaru river.   (2 × 1 = 2 marks)

ii)   <u>Factors influencing establishment of Mwea irrigation scheme</u>
<u>Topography</u>
- The gently slopping / undurating land makes it possible for water to flow by gravity onto / out of the irrigated land.
- The gently slopping land allows for mechanization which allows large areas to be put under cultivation.   (1 × 2 = 2 marks)
  <u>Soils</u>
- Presence of <u>black</u> cotton soil which retains water for a long time suitable for cultivation of rice   .   (1 × 2 = 2marks)

   <u>Population</u>
- The area was originally sparsely populated which enabled large areas to be put under cultivation / very few people were displaced thus it as cheaper to start the scheme.
                   (1 × 2 = 2 marks **)**
   <u>Government policy</u>
- There was need to keep political detainees busy / use them to provide free labour. This made the colonial government to set up Mwea where scheme there was a large detention camp.   (1 × 2 = 2 marks)

c)   i)   <u>Three areas of Zuider zee project</u>
- North Eastern folder
- South Flavoland
- East flavoland
- Markerward
- Wie ringer meer polder.   (3 × 1 = 3 marks)

ii)   **Differences between land reclamation in Kenya and Netherlands.**
- In Kenya the reclaimed land is relatively small while areas reclaimed in the Netherlands are large.
- In Kenya irrigation is used as a means of reclaiming dry areas while irrigation in the Netherlands is used to lower salinity of the soil in reclaimed lands.
- In Kenya simple methods like digging canals ditches to drain water from the land while in the Netherlands highly advanced methods like draining land from the sea/ creating a polder are used.
- In Kenya dykes are used to control water floods while in the Netherlands dykes protect the reclaimed land from invasion by the sea.
- In Kenya land is reclaimed from marginal areas and swamps while in the Netherlands it is from the sea.

- Drought resistant crops are planted in marginal areas while in the Netherlands hardy crops lie oats, barley are planted in the polders.
- In Kenya there is low market for irrigated crops while in the Netherlands there is a large market for irrigated crops.

(4 × 2 = 8 marks   Comparison must be complete to score.)

10. (a)(i)Name the substances (3mks)
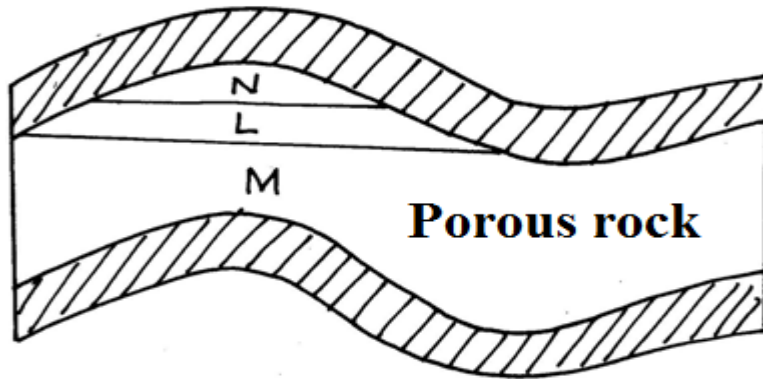
L-Oil
M-Underground water
N-Natural gas

(3 x 1 =3 Marks)

(ii)Give three by-products obtained when crude oil is refined (3mks**)**
- Bitumen
- Wax
- Lubricants such as grease
- Petrochemicals

(3 x 1 =3 Marks)

(b State five effects of mining on the environment (5mks**)**
Mining causes
- dereliction of land
- Pollution of water and land
- Disruption /lowering of the water table
- Instability of basement rock
- Destruction of bio diversity
- Soil erosion
- Wastage of agricultural land

(5 x 1 =5 Marks)

(c)(i)Describe the stages involved in the processing of trona from lake magadi
(6mks)

On reaching the factory ,trona is separated from water by being put on large sieve –like trays√

The water from the trona is directed back into the lake√

The trona is then washed to remove impurities such as mud and salt.It is heaped on the ground to dry√

After drying ,it is heated in huge cylinders called desiccators .The heating separates sodium carbonate (soda ash) from sodium   bi -carbonate √.

When heating is   complete, the soda ash is allowed to cool√.

Soda ash is then ground into poweder and sieved√

The powder is packed in paper or jute bags, ready for transportation to the market√.

(6 x 1 = 6marks Procedure must be followed)

(ii) Ways in which Kenya has been profited from the mining of trona on lake magadi
(8mks)

- Through exporting trona ,the country earns foreign exchange which is used to important essential items like machinery
- The mining of trona has created employment to many Kenyans improving their living standards it has led to establishment of industries by providing raw materials e.g glass industries
- It has led to provision of social amenities e.g hospitals, schools hence improving living standards.
- Mining of trona has stimulated the development of transport lines e.g it has led to the growth of Magadi town.
- The company that runs the mining of trona has improved the living standards of the local people by providing free water for domestic and livestock use
- The government earns revenue through taxation of the earnings from the sale of ''soda ash.

(4 x 2 =8 Marks)