

Geography and environment

Date: 23 / 06 /2022

Period: 8H30 – 11H30



END OF TERM III EXAMINATIONS

GRADE / LEVEL: LOWER LEVEL

COMBINATIONS: S2

DURATION: 3HOURS

MARKS:

..... /100

INSTRUCTIONS

There are 18 questions in this paper

This paper has two section A and B.

SECTION A: This section is compulsory. (55marks)

SECTION B: Attempt any three question. (45marks)

Use only a blue or black pen.

**SECTION A: ANSWER ALL QUESTIONS IN SECTION A
(55MARKS)**

1. (a) Identify the types of scale used on maps. **(3marks)**
(b) State the main types of photograph. **(2marks)**
2. (a) What are the agents of erosion? **(2marks)**
(b) Give any three ways soil Erosion occurs. **(3marks)**
3. List three uses of vegetation cover. **(3marks)**
4. Outline the physical features resulting from folding. **(3marks)**
5. (a) What does mean renewable energy resource? **(1mark)**
(b) List the resources of energy used in Rwanda. **(4marks)**
6. Outline five methods used to conserve soil fertility in Rwanda. **(5marks)**
7. Describe the effects of climate change in Rwanda. **(3marks)**
8. Differentiate natural forest from secondary forest. **(4marks)**
9. (a) What is fishing? **(1mark)**
(b) Explain the difference between hook method from line method of fishing. **(4marks)**
10. Identify problems that face water bodies in Rwanda. **(4marks)**
11. Differentiate between mining and quarrying. **(4marks)**
12. Identify five problems affecting trade in Rwanda. **(5marks)**
13. Estimate the negative effects resulting from tourism activities. **(4marks)**

SECTION B: ANSWER ONLY FOUR QUESTIONS. (45MARKS)

14. (a) Show the benefits of industrial growth in Rwanda. **(5marks)**
(b) Analyze the factors for location, growth and development of industries in Rwanda. **(10marks)**
15. (a) Choose three techniques or strategies to be used in environmental conservation. **(5marks)**
(b) Analyse five reasons why forests conservation is important. **(10marks)**
16. (a) Explain the factors influencing population distribution in Rwanda. **(5marks)**
(b) Evaluate the problems that are associated with population growth in Rwanda. **(10marks)**
17. (a) What is Settlement? **(1mark)**
(b) Describe the types of rural settlement. **(4marks)**
(c) Identify the urban functions. **(10marks)**
18. (a) Explain the factors affecting the keeping of small animals in Rwanda. **(10marks)**
(b) Discuss the contribution of livestock farming in Rwanda. **(5marks)**

END

END OF TERM III EXAMINATIONS

MARKING SCHEME

Subject: Geography and environment

MARKS:/100

SECTION A: (55MARKS)

1. (a) Identify the types of scale used on maps. **(3marks)**

The types of scale:

- Linear scale
- Fraction scale
- Statement scale

- (b) State the main types of photograph. **(2marks)**

The main types of photograph are:

* Ground photograph :horizontal and oblique

*Aerial photograph: oblique and vertical

2. (a) What are the agents of erosion? **(2marks)**

Agents of erosion include:

- Running water
- Wind
- Moving ice
- Gravity
- Animals
- Humans.

- (b) Give any three ways soil Erosion occurs. **(3marks)**

Soil erosion occurs through the following ways:

- Splash erosion,
- Sheet erosion,
- Rill erosion,
- Gully erosion

3. List three uses of vegetation cover. **(3marks)**

The following are the uses of vegetation cover:

- ✓ Woodlands in Rwanda are the main sources of the charcoal that is used in homes.

- ✓ Woodlands provide firewood and timber for building.
 - ✓ There is bee keeping and collecting of medicinal herbs in the woodlands.
 - ✓ Some wild animals live in woodlands that attract tourists.
 - ✓ Grasslands are important because they provide pasture for livestock. Many of the pastoralists in Rwanda who keep large herds of livestock are found in the grassland areas in the eastern parts of the country.
4. Outline the physical features resulting from folding. **(3marks)**

The physical features resulted from folding are:

- Inter-montane plateaus
- Inter-montane basins
- Valley and ridge landscapes
- Rolling plains
- Fold mountains

5. (a) What does mean renewable energy resource? **(1mark)**
 Renewable energy resource is Energy resources that can be used without reducing the quantity available for the future for example, sun, wind, wood, biomass.
- (b) List the resources of energy used in Rwanda. **(4marks)**

The sources of energy used in Rwanda include:

- Hydroelectric power
- Gas
- Biomass
- Peat-based energy
- Geothermal power
- Biogas
- Solar power
- Wood fuel

6. Outline five methods used to conserve soil fertility in Rwanda. **(5marks)**

The methods used to conserve soil fertility in Rwanda are:

- Crop rotation,
- use of fertilizers,
- planting cover crops,
- mulching,
- contour ploughing,
- afforestation,
- strip cropping,
- controlled grazing,
- terracing of land,

- creating wind breakers.

7. Describe the effects of climate change in Rwanda. **(3marks)**

The following are some of the resultant effects of climate change in Rwanda:

Drought (due to long sunny period)

Landslides (due to heavy rainfall)

Floods (by water bodies due heavy rains)

Aridity and desertification (by absence of vegetation due to heavy sun shine).

8. Differentiate natural forest from secondary forest. **(4marks)**

Natural forest grows naturally in an area without any human aid. It grows under natural physical conditions and has not been interfered with by people or animals while Secondary forest grows naturally in an area after being interfered with by people or animals.

9. (a) What is fishing? **(1mark)**

Fishing is the process of extracting valuable resources that are found in water bodies.

(b) Explain the difference between hook method from line method of fishing. **(4marks)**

Hook method: A string attached to a strong stick is tied to a hook on its other end. A bait is stuck to the hook and the sting thrown into the water. The fisherman holds the stick and waits to notice the string being pulled as fish is caught and tries to free itself.

Line fishing method: This involves using a long strong line with many hooks on which baits are attached. The line is attached to a boat that drags it along in the water. Fish are caught as they try to eat the bait.

10. Identify problems that face water bodies in Rwanda. **(4marks)**

The problems that face water bodies in Rwanda:

- Climate change through drought causes dry up
- Overuse by high rapid population growth
- Water pollution by industrial wastes
- River silting
- Deforestation of watershed.

11. Differentiate between mining and quarrying. **(4marks)**

Mining differs from quarrying by through mining; people extract valuable minerals, while in quarrying, we extract sand, rocks, gravels, pebbles for building or construction.

12. Identify five problems affecting trade in Rwanda. **(5marks)**

Problems affecting trade in Rwanda are:

- The landlocked position

- This affects Rwanda's trade with overseas countries. Goods have to pass through other countries which requires Rwanda to pay certain charges to those countries.
 - Long distances to the sea ports,
- the distances to the sea ports from Rwanda are very long which causes delaying of goods. For example, from Kigali to Mombasa, it is 1477 kilometers while it is 1460 kilometers to Dar-es salaam.
 - High transport costs
- The cost of transporting good to and from the sea ports is very high and expensive.
 - Low income levels
- Many Rwandans have low incomes. Many Rwandans have low income and are not able to pay to certain goods.
 - Use of different currencies
- International trade is transacted using foreign currency which is high than our local currencies which is very weak.
 - Language barrier: Many Rwandans are not fluent in the different languages and this makes communication difficult when transacting business between individuals from the different countries.
 - Poor roads
- Murram roads in most rural parts of Rwanda are not usable during the wet seasons. This makes movement of trade goods to markets difficult.
 - Production of similar goods
- Rwanda and her main trading partners within the Eastern African region produce similar goods. This limits market for Rwanda's exports to the region.

13. Estimate the negative effects resulting from tourism activities.

(4marks)

The negative effects resulting from tourism activities are:

- Prostitution
- Drug abuses
- Moral decay
- Environmental degradation (wildlife)
- Loss of local culture
- Inflation of price on local products
- Conflicts between local people and wildlife
- Capturing of agricultural farms by extension of tourism resorts.
- Population displacement (relocation).

**SECTION B: ANSWER ONLY FOUR QUESTIONS OF YOUR CHOICE.
(45MARKS)**

14.(a) Show the benefits of industrial growth in Rwanda. **(5marks)**

The benefits of industrial growth in Rwanda:

- ✓ Source of employment
- ✓ Source of incomes to people
- ✓ Generation of revenue to government
- ✓ Adding value to local products
- ✓ production of exportable good.
- ✓ Import substitution
- ✓ Development of infrastructures
- ✓ Development of social amenities
- ✓ Controlling rural urban migration
- ✓ Creating market for raw materials.

(b)Analyze the factors for location, growth and development of industries in Rwanda. **(10marks)**

The factors that favour location, growth and development of an industry include:

- a)** Availability of raw materials: Rwanda has different types of raw materials that attract industries in different locations.
- b)** Availability of capital: The money required to start an industry is called capital. Sometimes, the government, companies and individuals borrow loans to set up an industry.
- c)** Availability of labour: Rwanda has a large population and many of the people get employment in the manufacturing industries.
- d)** Availability of market: Most of the agricultural and the small scale industries in Rwanda sell their products locally. There are other industrial products which are sold outside the country.
- e)** Availability of power supply: Industries are located in areas where power is easily accessible. Power is needed to run machines in a factory.
- f)** Government policy: The government of Rwanda has been encouraging investors to set up industries in the country to create employment and to boost economic growth.
- g)** Availability of water: Some industries such as those making beverages and breweries require plenty of water.
- h)** Good transport and communication networks: It is necessary to have well developed means of transport to be able to move raw materials to the factories and the finished products to the markets.

15. (a) Choose three techniques or strategies to be used in environmental conservation. **(5marks)**

The techniques to be used in environmental conservation:

a) Recycling/re-using: This refers to utilizing wastewater from one process to another where lower-quality water is acceptable. This is meant to reduce the amount of wastewater, pollution and all together increase water supplies.

b) Treating or disinfecting community wells and boreholes during drought and floods. This is to maintain water quality. Water treatment is the process of cleaning water. Treatment makes the water safe for people to use. Treatment includes disinfection with chemicals to kill any germs in the water.

c) Removing invasive plants: Physical removal of the alien plants is a low-cost measure to improve an area's water quality.

d) Promoting community empowerment initiatives through high value economic activities such as fishing, beekeeping as well as value addition so that communities are motivated to protect the water catchment areas.

e) Protecting water catchment areas/water towers, river banks and water bodies from destruction and contamination.

f) Introducing the environmental education.

g) Creating public awareness

h) Participating in tree planting program.

i) Controlling of forest fires.

j) Proper planning of land use.

k) Planting trees in the farms (agro-forestry)

l) Creation of zoo, wild animals are protected in fenced area outside their natural habitat for easy accessibility.

(b) Analyse five reasons why forests conservation is important.

(10marks)

The following are some reasons explaining why forests conservation is important:

- Forests create oxygen: They take carbon dioxide and transform it into oxygen.
- Forests filter the air and reduce pollution: They move air pollutants like carbon monoxide, nitrogen dioxide and sulfur dioxide.
- Forests provide food security: Besides on the nuts, berries, fruits, mushrooms and seeds that humans eat, the forests support a huge variety of animal life we also depend on for food.
- Forests help reduce climate change: Trees reduces the amount of gases that released into the atmosphere.

- Forests are an important part of the water cycle: With their roots, trees pull water from the earth and release it back into the atmosphere.
- Forests protect soil from erosion: The leaves and branches that fall from trees also help keep rainfall from washing soil away.
- Forests provide medicine: There are several types of trees known for medical properties like the moringa tree.
- Forests support biodiversity: When species are threatened and go extinct, it disrupts the ecosystem.
- People depend on forests: Over 1.5 billion people depend on forest resources for their livelihood.
- Forests protect crops from strong wind that can damage them

16.(a) Explain the factors influencing population distribution in Rwanda. **(5marks)**

The following factors influence people to settle in certain areas in Rwanda:

- ✓ Relief: steep slopes discourage settlement while, gentle slopes favor it.
 - ✓ Rainfall: Wet areas support the crop growth for farmers but dry areas discourage settlement.
 - ✓ Soil fertility: Infertile soils attract many farmers but those exhausted are empty with people.
 - ✓ Also, well drained soils favor to settlement than logging soils.
 - ✓ Land ownership: areas with plantation growth have low density than the areas with food crops
 - ✓ Government policy by creation of planned settlement
 - ✓ Urbanization: Urban areas have high density comparing to rural areas.
 - ✓ Occurrence of minerals: minerals fields attract many people.
 - ✓ Historical factors: Headquarters of kingdom register high density
- (b)** Evaluate the problems that are associated with population growth in Rwanda. **(10marks)**

Some of these problems are:

- Pressure on land for farming in Rwanda has become so scarce that people have encroached on to the forests and swampy areas. Others have settled on steep slopes like Gakenke where there are
- dangers of landslides. Others who are landless have migrated to towns in search of employment.
- Land fragmentation: The piece of land owned by a family keeps being subdivided over generations. Currently many families own very small pieces of land that cannot yield enough food for the members.

- Declined soil fertility: Cultivation on a piece of land is carried out year after year with little use of manure. This has caused soil exhaustion leading to low crop yields. In turn there is shortage of food.
- High expenditure by the government: government spends large amounts of money to be able to provide social amenities such as health facilities, clean water, sufficient food and schools. These amenities are never enough. It is also difficult for the government to plan effectively for a rapidly growing population.

17.(a) What is Settlement? **(1marks)**

Settlement refers to how people live and carry out their economic, political, religious and social activities.

(b) Describe the types of rural settlement. **(4marks)**

There are five types of rural settlements in Rwanda:

- Grouped settlement: is a mode of settlement having between 100 and 200 mud-bricked houses in an area.
- Nucleated settlement: are clustered together round a nucleus such as route junctions or where a given resource is being extracted.
- Linear settlement: the pattern takes the shape of the feature which could be a straight line or curved. The pattern is likely to be maintained even when the population grows.
- Isolated settlement: In isolated settlements, dwellings or homes are far apart. Isolated settlements occur where land is owned individually and every family settles on its piece of land.
- Planned settlement: Planned settlements in Rwanda originated from The National Human Settlement Policy, adopted in December 1996.

(c) Identify the urban functions. **(10marks)**

Functions of urban centers are:

- It is an administrative center, and serves as the national capital. The main residence and offices of the President of Rwanda are located here. Offices for various Government Ministries are also found here.
- It is a residential center with different classes of residential zones.
- It is a transport and communication center. It is a focus of roads and has an International airport.
- It is a financial center, with major banks and insurance companies such as Bank of Kigali, Equity Bank, Kenya Commercial Bank, and Sorras Insurance Company.
- It is a recreational and cultural center with museums, national stadium, several hotels and clubs.
- It is an educational center with several primary and secondary schools, universities and institutions of higher learning. Such institutions include College of Education, College of Business and

Economics and University of Rwanda (which has over three campuses)

- Industrial center with major industries and factories.

18.(a) Explain the factors affecting the keeping of small animals in Rwanda. **(10marks)**

Factors affecting the keeping of small animals are:

- Favorable climate: Livestock such as goats, hens, pigs and rabbits survive in a wide range of climate.
- Relief: Areas of high relief such as those in the western side of the country favor the rearing of such animals as pigs. The drier areas on the eastern side of the country favor bee keeping.
- Government policy: The government has undertaken a number of steps to support the rearing of small animals in Rwanda. These include facilitating extension services, providing subsidized farm inputs and ensuring good roads for transport of animal products.
- Traditions of the people: Many Rwandans have always had one or more animals kept at home.
- Land: As population increases, the available land for agriculture keeps on shrinking. This has forced many people never to the keeping of small animals.
- Availability of pasture: Small animals need a small piece of land for pasture. Some of them survive on the leftovers at home.

(b) Discuss the contribution of livestock farming in Rwanda.

(5marks)

Agricultural activities in Rwanda provide:

- a) Food for the population, for example, food from fishing and farming.
- b) Employment to people, for example, those working in plantations or factories.
- c) Income to people. This helps to raise the people's standards of living.
- d) Revenue to the government through taxation.
- e) Exports to earn foreign exchange. This revenue is in turn used for economic development of the country.
- f) The development of transport and communication networks in the rural areas.
- g) The commodities required by people for use. This has enabled people to have access to the basic needs and services. This leads to improved standards of living.
- h) Raw materials for industries.
- i) Led to the growth of towns.

END