

Geography and Environment

Date: 22 June 2023

Period: 8H30'-11H30'



END OF TERM III EXAMINATIONS

GRADE / LEVEL: LOWER LEVEL

COMBINATIONS: S2

DURATION: 3HOURS

MARKS:

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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. (55MARKS)

- 1) Name the main parts of a photograph. **(3 marks)**
- 2) (a) Name any three folded mountains found in Africa. **(3 marks)**
(b) Mention any two causes of earthquakes. **(2 marks)**
- 3) Identify any three uses of vegetation cover in Rwanda. **(3 marks)**
- 4) (a) What are the drainage basins found in Rwanda? **(2 marks)**
(b) Mention any three problems that water bodies face. **(3 marks)**

- 5) List the resources of energy used in Rwanda. **(4 marks)**
- 6) Outline any four techniques used to discourage mass wasting. **(4 marks)**
- 7) Outline any four effects of climate change in Rwanda. **(4 marks)**
- 8) Describe the major characteristics of urban settlements. **(5 marks)**
- 9) Identify the main parts of horizontal ground photograph. **(3 marks)**
- 10) Explain any three problems affecting trade in Rwanda. **(6 marks)**
- 11) (a) What are the different types of pollution? **(3 marks)**
(b) Identify two ways of taking care of the land after mining. **(2 marks)**

- 12) (a) What does population growth mean. **(2 marks)**
- 13) Identify any four negative effects resulting from tourism activities. **(4 marks)**

SECTION B: Attempt any three questions of your choice. (45 marks)

- 14) (a) List the categories of valley soils in Rwanda. **(2 marks)**
(b) Outline any three methods used to conserve soil fertility in Rwanda. **(3 marks)**
(c) Analyze the effects of soil erosion on Rwandan population. **(10 marks)**
- 15) (a) Describe the main characteristics of subsistence farming. **(5 marks)**

- (b) Evaluate the contribution of plantation farming on sustainable development in Rwanda. **(10 marks)**
- 16) (a) Explain any four the methods used in fish preservation in Rwanda. **(6 marks)**
- (b) Explain any four factors that influence fish farming in Rwanda. **(8 marks)**
- 17) (a) Using a sketch map, locate two natural forests of Rwanda. **(5 marks)**
- (b) Examine the effects of deforestation in Rwanda. **(10 marks)**
- 18) (a) Outline problems resulting from industrial development in Rwanda. **(5 marks)**
- (b) Discuss the advantages provided by industrial growth in Rwanda. **(10 marks)**

- END -

GEOGRAPHY AND ENVIRONMENT – MARKING GUIDE

LEVEL: SENIOR TWO

SECTION A: ANSWER ALL QUESTIONS. (55MARKS)

1. Name the main parts of a photograph. **(3 marks)**

The main parts of a photograph are:

Fore ground,

middle ground,

back ground (for each part, we find out: left, right, central).

2. (a) Name any three folded mountains found in Africa. **(3 marks)**

Any folded mountain found in Africa are:

- Atlas (in Morocco),
- Drakensberg (in South Africa),
- Hoggar and ahaggar(Etiopia),
- Blue mountain.

- (b) Mention any two causes of earthquakes. **(2 marks)**

The causes of earthquakes are:

- Tectonic forces which cause vibrations or shocks within the earth's crust.
- Gravitative pressure
- Isostatic adjustment
- Excessive energy release within the mantle

3. Identify any three uses of vegetation cover in Rwanda. **(3 marks)**

- 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 pastoralist in Rwanda who keep large herds of livestock are found in the grassland areas in the eastern parts of the country.

4. (a) What are the drainage basins found in Rwanda? **(2 marks)**

The drainage basins in Rwanda are the following”

- ✓ Congo basin
- ✓ Nile basin

(b) Mention any three problems that water bodies face. **(3 marks)**

The problems that face water bodies in Rwanda:

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

5. List the resources of energy used in Rwanda. **(4 marks)**

The sources of energy used in Rwanda include:

- Hydroelectric power
- Gas
- Biomass
- Peat-based energy
- Geothermal power
- Biogas
- Solar power
- Wood fuel Each of these has been explained below.

6. Outline any four techniques used to discourage mass wasting. **(4 marks)**

Techniques used to discourage mass wasting include:

- Afforestation
- Re-afforestation
- Agro-forestry
- Planting cover crops
- Ploughing across the contours
- Using soil embankments on slopes
- Terracing
- Mulching
- Zero grazing

7. Outline any four effects of climate change in Rwanda. **(4 marks)**

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

- Drought due to prolonged dry season
- Landslides caused by heavy rainfall in mountainous region of Rwanda
- Floods due to unusual heavy rainfall
- Aridity and desertification resulting from human activities
- Change in river discharge
- Migration and extinction of wildlife

8. Describe the major characteristics of urban settlements. **(5 marks)**

The major characteristics shared by urban (cities) settlements include the following:

- ✓ They are residential, commercial and administrative centres.
- ✓ They have high traffic congestion especially during rush hours.

- ✓ Urban centres are route focused, that is, they are centres of communication.
- ✓ They have high population compared to rural areas.
- ✓ Settlements range from high-cost housing units to low-cost housing.
- ✓ They are built-up areas with tall buildings.

9. Identify the main parts of horizontal ground photograph. **(3 marks)**

Three parts of horizontal ground photograph are **Background, middleground and foreground.**

10. Explain any three problems affecting trade in Rwanda. **(6 marks)**

(a) 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.

(b) 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.

(c) High transport costs

The cost of transporting good to and from the sea ports is very high and expensive.

(d) Low income levels Many Rwandans have low incomes.

Many Rwandans have low income and are not able to pay to certain goods.

(e) Use of different currencies

International trade is transacted using foreign currency which is high than our local currencies which is very weak.

(f) 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.

(g) 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.

(h) 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.

11. (a) What are the different types of pollution? **(3 marks)**

The different types of pollution include:

- Air pollution
- Water pollution
- Soil pollution
- Radioactive pollution
- Noise pollution

- (b) Identify two ways of taking care of the land after mining. **(2 marks)**

The ways of taking care of the land after mining are:

- Piles of waste rock and gaping pits are created within the mining area. Such waste land cannot support vegetation or agriculture unless it is rehabilitated.
- Plants some vegetation before abandoning the site.
- Setting up aquariums on the mining pits can upgrade the environment.

12. (a) What does population growth means. **(2 marks)**

Population growth means the increase and decreasing in the number of people in a given area over a given period of time.

(b) Identify any four effects of migration in the area of origin. **(4 marks)**

Some of the effects are:

- **Depopulation:** The areas which people move from may experience reduction in population if the movement involves too many people. This could lead to under- utilization of resources due to lack of enough labor force.
- **Reduced demand for local products:** Due to the reduction in the number of people it could lead to a reduction in demand for goods and services.
- **Reduced skilled labor:** If those moving out are the educated and skilled people, for example when professionals like teachers, doctors and engineers migrate, this causes a shortage of the skilled people. Rural areas in Rwanda experience lack of skilled people because many of the professionals are employed in towns.
- **Ease in population pressure:** If people move out because of pressure on land, there will be sufficient land for those left behind. When people are few, the rate of environmental degradation reduces.

13. Identify any four negative effects resulting from tourism activities.

(4 marks)

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
- Conflict between local people and wildlife
- Capturing of agricultural farms by extension of tourism resorts.
- Population displacement (relocation).

SECTION B: Attempt any three questions of your choice. (45 marks)

- 14.** (a) List the categories of valley soils in Rwanda. **(2 marks)**

The categories of valley soils in Rwanda are:

- Vertisols
- Organosoil/histosols

- (b)** Outline any three methods used to conserve soil fertility in Rwanda.

(3 marks)

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.

- (c) Analyze the effects of soil erosion on Rwandan population. **(10 marks)**

Effects of soil erosion

i) Soil erosion in parts of Rwanda has made a larger part of the land infertile. This has lowered farm productivity and is a great loss to farmer's earning and government revenue. There is also rise in poverty.

ii) Soil erosion has led to loss of arable land and spread of aridity.

iii) With the deterioration of land, the farmers are forced to migrate to make a living in other places.

iv) When soil erosion sets in, the vegetation and other important organisms are lost. In turn, the land becomes furrowed with gullies. This makes it to lose its natural beauty.

v) The soil washed by surface flow is deposited in the streams which causes water pollution. This also causes siltation.

vi) Absence of vegetation cover increases chances of flooding.

15. (a) Describe the main characteristics of subsistence farming.

(5 marks)

Characteristics of subsistence farming

- Crops grown are on small scale and are mainly food crops for home consumption
- Simple tools such as hand hoes are used
- Use of poor methods of farming such as over cultivation, cultivating upper hills, etc
- Different crops are grown together
- Low yield per square unit of land cultivated
- Farms are owned by individuals
- It employs people who are mainly members of the family and at times few hired workers.

(b) Evaluate the contribution of plantation farming on sustainable development in Rwanda. **(10 marks)**

The contribution of plantation farming on sustainable development in Rwanda are:

- a) With the high level of mechanisation, productivity is also high.
- b) The specialisation in production process leads to high quality products.
- c) Plantations produce cash crops which provide export earnings.

- d) Plantation agriculture employs a large number of labourers, both skilled and semi-skilled.
- e) Plantation farming encourages industries that process the agricultural raw materials.
- f) Plantation agriculture provides market for agricultural machinery.
- g) On some plantations, infrastructure such as roads, water supply and electricity have developed. Plantation owners may also provide schools, houses and hospitals for the workers.
- h) Some plantations are research and demonstration centres for a wide range of crops.

16. (a) Explain any four the methods used in fish preservation in Rwanda. **(6 marks)**

The traditional methods of preserving fish are still very common today include:

- **Sun drying :** exposing fish under solar radiation
- **Salting:** means applying salt on the fish. As much salt as possible is rubbed on the fish to kill the bacteria that causes rotting.
- **Smoking over open fire**
- **Canning:** involves processing and packing fish in pressurised cans that are tightly sealed.
- **Fish freezing:** means keeping fish in very cold chambers which makes the fish to freeze. Bacteria cannot survive on frozen fish, and thus such fish can stay for a longer or a long time.

(b) Explain any four factors that influence fish farming in Rwanda. **(8 marks)**

The factors that influence fish farming in Rwanda are:

- ★ Existence of natural wetlands like swamps and marshlands

(ii) Landslides , when the rain falls on a slope where there is no vegetation, the soil gets soaked very easily.

(iii) Soil erosion, removal of vegetation exposes soil to agents of erosion such as running water. Steep slopes such as in Western and Northern provinces are heavily affected by soil erosion.

(iv) Shortage of wood raw materials and fuel, If we continue clearing forests, eventually there will be no mature trees which provide timber for building and construction. Also, there will be a shortage of firewood and charcoal which some Rwandans still rely on for cooking.

(v) Climate change, deforestation increase in global temperatures. With higher temperatures, there is more evaporation which could lead to drying up of rivers, wetlands and lakes which are the sources of water.

18. (a) Outline problems resulting from industrial development in Rwanda. **(5 marks)**

The problems resulting from industrial development in Rwanda are:

- ★ Pollution: Industries can lead to both air and water pollution.
- ★ Rural-urban migration: As more industries are set up in towns, more people move from rural areas hoping to get employment in these industries.
- ★ Over-exploitation of natural resources: Resources such as forests are overexploited as the demand for raw materials increase.
- ★ Displacement of people: Development of industries creates demand for space. As a result, people are made to relocate to allow for building of a factory.
- ★ Land shortage due to the need for industrial expansion.

(b) Discuss the advantages provided by industrial growth in Rwanda. **(10marks)**

The advantages provided by industrial growth in Rwanda are:

- Creation of employment opportunities: Industries create job opportunities enabling many people to get employment and are able to earn income to live on.
- Generating revenue for government: The government generates revenue by levying taxes to the industries
- Adding value to local products: Processing of raw material increases the value thus earning more compared to selling the products in their raw form.
- Production of export goods: Some industries produce goods that are exported to enable the country to earn foreign exchange.
- Import substitution: Manufacturing industries supply the local people with goods at lower cost than the cost of similar imported goods.
- Development of infrastructure: When an industry is set up at a place, other developments such as water supply, roads and electricity are provided in the area.
- Development of social amenities: Industrial developments attracts development of social amenities such as schools, health centres and recreation facilities.
- Controlling rural-urban migration: When industries are set up in rural areas, people get employed there instead of moving to towns in search of jobs.
- Creating market for raw materials: Development of agricultural oriented industries creates market for farmers.