

**GEOGRAPHY AND
ENVIRONMENT**
Date: 14th June 2024
Period: 8:30 -11:30



END OF TERM III EXAMINATION
QUESTION PAPER

GRADE: SENIOR TWO (S2)

LEVEL: ORDINARY LEVEL

DURATION: 3 HOURS

MARKS:

...../100

CAMIS:

...../30

INSTRUCTIONS

- 1) Do not open this question paper until you are told to do so.
- 2) This paper consists of **TWO** sections: **A** and **B**
SECTION A: Attempt **ALL** questions (55 marks)
SECTION B: Attempt **ONLY THREE** questions in this section (45 marks)
- 3) Avoid any rubbing
- 4) Use only a **blue** or **black** pen

SECTION A: Attempt all questions. (55 marks)

- 1) Among the following alternatives; choose a letter that corresponds to the two types of aerial photograph: **(2 marks)**
- a) Horizontal and vertical aerial photograph.
 - b) Oblique ground and aerial vertical photograph.
 - c) Vertical aerial and oblique aerial photograph.
 - d) Letter (a) and (c) are the correct answer.

- 2) (a) A volcano is known as: **(2 marks)**
- i) A mountain formed by erosion.
 - ii) A mountain formed by accumulation of molten rock, ash and cinder erupted on the earth's surface.
 - iii) A type of earthquake.
 - iv) A glacier with a conical shape.

(b) A caldera lake is defined as:

- i) A type of lava flowing.
- ii) A volcanic island.
- iii) A volcanic cone with gentle or steep slope.
- iv) A large crater lake formed by explosive eruption and collapsing. **(2 marks)**

- 3) (a) Select the statement among these below that represents two soil conservation methods applied in Rwanda from the following: **(2 marks)**

- (i) Crop rotation and Terracing.
- (ii) Strip cropping and overgrazing.
- (iii) Zero grazing and deforestation.
- (iv) Terracing and pastoralism.

b) Match each type of soil found in Rwanda to its explanation. **(3 marks)**

Type of soil	Explanation
a) Kaolisols	i) They are found on the slopes of mountains in the north west of Rwanda, covering most parts of the Congo-Nile peak. They also form a larger part of the soils in the Birunga slopes. ii) They are developed on weathered parent material which mainly had clay mixed with iron and aluminium oxides. iii) They are mainly of alluvial origin. The two main categories of those soils are histosols and vertisols.
b) Valley soils	
c) Inceptisols	

- 4) Among the statements below, which is the best definition of drainage basin? **(2 marks)**
- The process by which water moves or exists on the surface of the earth.
 - The total area drained by a river and all its tributaries.
 - The low lying area that is seasonally or permanently covered by water.
 - None above is correct.
- 5) Write down any three crops grown under plantation farming in Rwanda. **(3 marks)**
- 6) Which methods among the following fishing methods, are practiced in Rwanda: Seining, Hooking, Trawling, Spearing and Gill net. **(2 marks)**
- 7) The following are examples of primary industries in Rwanda except: **(2 marks)**
- Fishing industry.
 - Forestry industry.
 - Food processing industry.
 - Mining industry.
- 8) Study the following alternatives and indicate the accurate type of photograph suitable for capturing a picture of a whole town. **(2 marks)**
- Ground horizontal photograph
 - Ground oblique photograph
 - Ground photograph
 - Aerial photograph.
- 9) You are studying a region with frequent landslides. Explain any two factors related to external landform processes that might have contributed to such stated disaster in that region. **(2 marks)**
- 10) Population distribution refers to how people are settled or spread out in the country. Explain any three factors that influence population distribution and settlement in Rwanda. **(3 marks)**
- 11) Silviculture relates to one of the following statements: **(2 marks)**
- Growing trees mixed with food crops
 - Harvesting trees for timber and fuels
 - The practice of controlling the growth, composition, health, and quality of forests to meet diverse needs and values.
 - management of natural forests only.
- 12) Explain any 2 factors influencing mining sector in Rwanda. **(4 marks)**
- 13) Using a map scale of **1:350,000**; find the ground distance in kilometer of a river that has a length of 7cm on a map. **(2 marks)**
- 14) How can the presence of vegetation influence the weathering of rocks? **(2 marks)**
- 15) Suppose that you are planning to travel from Bugesera towards the Birunga Mountains (located in the Highlands region) for a whole week. What types of clothing and gear would you pack considering the climatic conditions? **(2 marks)**

- 16) Suppose that you are appointed a district officer in charge development and environmental protection in one district of the eastern province of Rwanda with high demand of energy resources for both domestic and industrial use. Make use of your knowledge and skills gained in geography studies and help the population in that district to solve the above mentioned problem. **(3 marks)**
- 17) Suggest any 3 strategies that have to be undertaken by the government of Rwanda to control and reduce road accidents. **(6 marks)**
- 18) Some wildlife is progressively under extinction. Identify any two appropriate techniques to preserve wildlife. **(4 marks)**
- 19) Analyze the following characteristics of ranching and answer using **TRUE** for the right statement or **FALSE** for wrong statement. **(3 marks)**
- (a) Animals are kept for home consumption
 - (b) Cross breeding is done to improve the quality of animals
 - (c) Animals are only reared for milk production
 - (d) Ranches are subdivided into paddocks

SECTION B: Attempt any THREE questions. (45 marks)

- 20) Assess the ways chosen by the government of Rwanda for overcoming the problems of landlockedness. **(15 marks)**
- 21) a) From the table below, choose the corresponding urban function to the features listed: **(5 marks)**

Urban features	Urban functions
i) Ministry offices.
ii) Schools and Universities.
iii) Banks and Saving Cooperatives.
iv) Warehouses and Supermarkets.
v) Hotels and Restaurants.

- b) Assess any 5 factors have led to the growth of cities and towns in Rwanda. **(10 marks)**
- 22) (a) Estimate any five **(5)** disadvantages of tourism in different tourist sites of Rwanda. **(5 marks)**
- (b) Which possible solutions you can recommend Rwandan government to overcome the disadvantages of tourism in (a) above. **(10 marks)**
- 23) Elaborate any five **(5)** ways that can explain how studying the past tectonic movements help us predict future patterns of earthquakes and volcanic eruptions? **(15 marks)**
- 24) Vegetation is not only important to people but also to both domestic and wild animals. Vegetation is also important to the environment. The importance of

vegetation can be looked at in terms of economic and social benefits we get from it. Estimate the importance of vegetation that have been taken into consideration to be conserved. **(15 marks)**

END

**GEOGRAPHY AND
ENVIRONMENT**
Date: 14th June 2024
Period: 8:30 -11:30



END OF TERM III EXAMINATION
MARKING GUIDE

GRADE: SENIOR TWO (S2)

LEVEL: ORDINARY LEVEL

DURATION: 3 HOURS

MARKS:

...../100

CAMIS:

...../30

INSTRUCTIONS

- 1) Do not open this question paper until you are told to do so.
- 2) This paper consists of **TWO** sections: **A** and **B**
SECTION A: Attempt **ALL** questions (55 marks)
SECTION B: Attempt **ONLY THREE** questions in this section (45 marks)
- 3) Avoid any rubbing
- 4) Use only a **blue** or **black** pen

SECTION A: Attempt all questions. (55 marks)

1) Among the following alternatives, choose a letter that corresponds to the two types of aerial photograph:

(2marks)

- (a) Horizontal and vertical aerial photograph.
- (b) Oblique ground and aerial vertical photograph.
- (c) Vertical aerial and oblique aerial photograph.
- (d) Letter (a) and (c) are the correct answer.

Answer:

(c) The Vertical aerial and oblique aerial photograph. (2 marks)

2) (i) A volcano is known as

- (a) A mountain formed by erosion.
- (b) A mountain formed by accumulation of molten rock, ash and cinder erupted on the earth's surface.
- (c) A type of earthquake.
- (d) A glacier with a conical shape. **(2 marks)**

Answer: A volcano is known as a mountain formed by accumulation of molten rock, ash and cinder erupted on the earth's surface. **(Letter b). (2marks)**

(ii) A caldera lake is defined as:

- (a) A type of lava flowing.
- (b) A volcanic island.
- (c) A volcanic cone with gentle or steep slope.
- (d) A large crater lake formed by explosive eruption and collapsing. **(2 marks)**

Answer:

(d) A large crater lake formed by explosive eruption and collapsing. (2 marks)

3) (a) Select the statement among these below that represents two soil conservation methods applied in Rwanda from the following: **(2 marks)**

- (i) Crop rotation and Terracing.

- (ii) Strip cropping and overgrazing.
- (iii) Zero grazing and deforestation.
- (iv) Terracing and pastoralism.

Answer: i) Crop rotation and terracing

b) Match each type of soil found in Rwanda to its explanation.

(3 marks)

Type of soil	Explanation
a) Kaolisols	i) They are found on the slopes of mountains in the north west of Rwanda, covering most parts of the Congo-Nile peak. They also form a larger part of the soils in the Birunga slopes.
b) Valley soils	ii) They are developed on weathered parent material which mainly had clay mixed with iron and aluminium oxides.
c) Inceptisols	iii) They are mainly of alluvial origin. The two main categories of those soils are histosols and vertisols.

Answer:

a) _____ ii) →

b) _____ iii) →

c) _____ i) →

4) Among the statements below, which is the best definition of drainage basin?

(2 marks)

- a) The process by which water moves or exists on the surface of the earth.
- b) The total area drained by a river and all its tributaries.
- c) The low lying area that is seasonally or permanently covered by water.
- d) None above is correct.

Answer: b) The total area drained by a river and all its tributaries.

5) Write down any three crops grown under plantation farming in Rwanda.

(3 marks)

Answer: The crops grown under plantation farming are:

Coffee, Tea, Sugarcane and Pyrethrum. Only 3 crops are needed, 1 mark for each.

6) Which methods among the following fishing methods, are practiced in Rwanda:

Seining, Hooking, Trawling, Spearing and Gill net.

(2

marks)

Answer: Trawling and Seining **(1 mark for each)**

7) The following are examples of primary industries in Rwanda except:

(2marks)

(a) Fishing industry.

(b) Forestry industry.

(c) Food processing industry.

(d) Mining industry.

Answer: (c) Food processing industry.

8) Study the following alternatives and indicate the accurate type of photograph suitable for capturing a picture of a whole town.

(2 marks)

(a) Ground horizontal photograph

(b) Ground oblique photograph

(c) Ground photograph

(d) Aerial photograph.

Answer: d) Aerial photograph.

9) You are studying a region with frequent landslides. Explain any two factors

related to external landform processes that might have contributed to such stated

disaster in that region.

(2 marks)

Answer: Factors responsible for landslide are the following:

- ✓ **Steep slopes**/steep gradient
- ✓ **Heavy rainfall** leading to saturation of the land
- ✓ **Soil erosion** that weakens the soil and increase the risk of landslides.
- ✓ **Human activities** like deforestation, overgrazing
- ✓ **Weight of weathered materials** (amount of loads on a slope)
- ✓ **Nature of parent** rock which is smooth and impermeable.

- 10) Population distribution refers to how people are settled or spread out in the country. Explain any three factors that influence population distribution and settlement in Rwanda. **(3 marks)**

Answer: Only three factors are needed, 1 mark for each.

The following are factors that influence people to settle in certain areas in Rwanda.

- ✓ Relief
- ✓ Rainfall
- ✓ Soil fertility
- ✓ Land ownership
- ✓ Government policy
- ✓ Urbanization
- ✓ Occurrence of minerals
- ✓ Historical factors

- 11) Silviculture relates to one of the following statements: **(2 marks)**

- (a) Growing trees mixed with food crops
- (b) Harvesting trees for timber and fuels
- (c) The practice of controlling the growth, composition, health, and quality of forests to meet diverse needs and values.
- (d) management of natural forests only.

Answer:

(c) Silviculture relates to the practice of controlling the growth, composition, health, and quality of forests to meet diverse needs and values.

12) Explain any 2 factors influencing mining sector in Rwanda. **(4 marks)**

answer:

- **Availability of minerals**
- **Political stability**
- **Technology**

2 marks for each well explained point.

13) Using a map scale of **1:350,000**; find the ground distance in kilometer of a river that has a length of 7cm on a map. **(2 marks)**

Answer:

Given that: 1 cm represents 350,000cm=3.5km

$$\frac{7cm}{\frac{1}{350,000}} = \frac{7cm}{1} \times \frac{350,000}{1} = 2,450,000cm = 24.5km$$

The distance on ground is 24.5km

14) How can the presence of vegetation influence the weathering of rocks? **(2 marks)**

Answer: (only two points are needed, 1 marks for each)

vegetation influences the weathering of rocks in the following ways:

- ✓ Plant roots can physically break down rocks through wedging,
- ✓ Organic acids released by plants can chemically weather rock minerals.
- ✓ Vegetation cover can protect rocks from direct exposure to weathering agents.

15) Suppose that you are planning to travel from Bugesera towards the Birunga Mountains (located in the Highlands region) for a whole week. What types of clothing and gear would you pack considering the climatic conditions? **(2 marks)**

Answer: (Only 2 clothes are needed, 1 mark for each)

The one who moves from Bugesera having warm and dry weather conditions to Birunga Mountains whose weather conditions are cool and wet; will need to prepare the following for his/her journey.

- ✓ Warm layers for mornings and evenings,
- ✓ Waterproof gear for potential rain,
- ✓ Comfortable hiking shoes,

16) Suppose that you are appointed a district officer in charge development and environmental protection in one district of the eastern province of Rwanda with high demand of energy resources for both domestic and industrial use. Make use of your knowledge and skills gained in geography studies and help the population in that district to solve the above mentioned problem. **(3 marks)**

Answer: Only three ways are needed, 1 mark for each.

Different ways for overcoming the problem of high demand of energy resources include:

- ✓ Development of alternative energy sources such as solar, geothermal, wind, methane gas, biomass to supplement the available non-renewable power sources.
- ✓ Use of efficient energy saving stoves or cookers to limit the use of fuel wood for industrial and domestic purposes.
- ✓ Promotion of effective energy program such as low power consumption bulbs.
- ✓ Sensitizing people to switch off light when not in use.
- ✓ Encouraging the use of well-maintained vehicles with low fuel consumption.
- ✓ Educating people on energy making, conservation and management.
- ✓ Afforestation and reforestation to supplement the number of trees being cut for firewood and charcoal.
- ✓ Importing automobiles that use rechargeable batteries and solar energy resources.

17) Suggest any 3 strategies that have to be undertaken by the government of Rwanda to control and reduce road accidents. **(6 marks)**

Answer: Only three strategies are needed, 1 mark for each

- ✓ Public awareness campaign through “**Gerayo amahoro**”.
- ✓ Using fixed and mobile cameras along the road sides for controlling speed of drivers.
- ✓ Installation of speed governors within vehicles for public transport.
- ✓ Enlarging existing roads and construction of new ones.
- ✓ Using Breathalyzer for discouraging drunkard drivers.
- ✓ Establishing humps crossing roads for regulating the speed of vehicles

18) Some wildlife is progressively under extinction. Identify any two appropriate techniques to preserve wildlife. **(4 marks)**

ANSWER: Only 2 techniques are needed, 1 mark for each.

Wildlife under extinction can be preserved by:

- ✓ Protection in-situ: protection of the environment in which fauna survive
- ✓ Creation of zoo where fauna is regularly fed
- ✓ Mitigate poaching.

19) Analyze the following characteristics of ranching and answer using **TRUE** for the right statement or **FALSE** for wrong statement. **(3 marks)**

- (a) Animals are kept for home consumption
- (b) Cross breeding is done to improve the quality of animals
- (c) Animals are only reared for milk production
- (d) Ranches are subdivided into paddocks

Answer:

- a) Animals are kept for home consumption. **FALSE**
- b) Cross breeding is done to improve the quality of animals. **TRUE**
- c) Animals are only reared for milk production. **FALSE**
- d) Ranches are subdivided into paddocks **TRUE**

SECTION B: Attempt any THREE questions. (45 marks)

20) Assess the ways chosen by the government of Rwanda for overcoming the problems of landlockedness. **(15 marks)**

Answer: (Only 5 ways are needed, 1 mark for each)

Ways for overcoming problems of landlockedness:

- ✓ Landlocked countries like Rwanda depend on good political relations with transit countries.
- ✓ Rwanda has cooperated with neighbouring countries to improve transport routes
- ✓ The government has improved energy supply and Internet access to improve the flow of information.
- ✓ The United Nations has a law that protects landlocked countries from high taxation. From this law, Rwanda has obtained a right of access to and from the sea without taxation of traffic through transit states.
- ✓ Rwanda has made agreements on getting lower transport charges for goods through neighbour countries.
- ✓ Rwanda has improved air transport for connecting it with overseas.

21) a) From the table below, choose the corresponding urban function to the features listed: **(5 marks)**

Urban features	Urban functions
i) Ministry offices.
ii) Schools and Universities.
iii) Banks and Saving Cooperatives.
iv) Warehouses and Supermarkets.
v) Hotels and Restaurants.

Answer:

Urban features	Urban functions
i) Ministry offices.	Administrative center
ii) Schools and Universities.	Educational center
iii) Banks and Saving Cooperatives.	Financial center
iv) Warehouses and Supermarkets.	Commercial center
v) Hotels and Restaurants.	Tourism center

b) Assess any 5 factors have led to the growth of cities and towns in Rwanda. **(10 marks)**

Answer: (Only five explained factors are needed, 2 marks for each)

The factors that have led to the growth of cities and towns in Rwanda

- ✓ Historical issues
- ✓ Economic activities
- ✓ Transport and communication
- ✓ Administrative activities
- ✓ Human migration
- ✓ Natural growth of urban settlements

22) (a) Estimate any five (5) disadvantages of tourism in different tourist sites of Rwanda. **(5 marks)**

Answer: (Only 5 disadvantages are needed, 1 mark for each)

The disadvantages of tourism in the tourist sites are:

- ✓ Easy spread of diseases.
- ✓ Clearing of vegetation.
- ✓ Deterioration of culture.
- ✓ Pressure on accommodation facilities limiting local tourists.
- ✓ Pressure on local resources.
- ✓ Pollution of the environment
- ✓ Encroachment on the privacy of the local communities.
- ✓ Conflict between people and wildlife

(b) Which possible solutions you can recommend Rwandan government to overcome the disadvantages of tourism in (a) above. **(10 marks)**

Answer: (Only 5 solutions are needed, 2 marks for each)

- ✓ Re-equip and rehabilitate the existing hotels and lodges
- ✓ Carrying out a comprehensive training related to tourism
- ✓ Put in place a massive campaign to the local people to make them aware of tourist activities
- ✓ Encourage local people to invest in tourism industry.
- ✓ Improvement in transport and communication networks in all regions of the country.
- ✓ Establishing anti-poaching units in different tourist sites.
- ✓ There should be extensive advertisement about tourist sites.
- ✓ The government should integrate tourism in the education system at all levels.
- ✓ Promotion of security in the tourist sites.

- ✓ The government has enacted laws that prohibit poaching

23) Elaborate any five (5) ways that can explain how studying the past tectonic movements help us predict future patterns of earthquakes and volcanic eruptions? **(15 marks)**

Answer: Only 5 points are needed, 3 marks for each.

- ✓ Analyzing geological features: fault lines and past volcanic activity.
- ✓ Identify seismic areas with potential tectonic activity.
- ✓ Application of this knowledge to make informed predictions.
- ✓ Resettling people away from seismic zones and areas prone to volcanic activity.
- ✓ Using building materials that are flexible and earthquake-resistant like, steel or reinforced concrete

24) Vegetation is not only important to people but also to both domestic and wild animals. Vegetation is also important to the environment. The importance of vegetation can be looked at in terms of economic and social benefits we get from it. Estimate the importance of vegetation that have been taken into consideration to be conserved. **(15 marks)**

Answer: Any 5 importance are needed, 3 marks for each.

The following benefits vegetation:

- ✓ Filtration of dirty water from mountain sides
- ✓ store of excess water provided by run offs during heavy rain fall
- ✓ Regulate rivers especially in dry season
- ✓ keep soil's moisture.
- ✓ 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. They are attraction to tourists. This is important because tourism generates income for the government as well as creating employment opportunities.
- ✓ The open areas where the bushes are not so thick have grass where animals graze.
- ✓ 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.

- ✓ Some of the grasslands have been set aside for wildlife conservation and are home to a variety of grazing animals. Most of the Akagera National Park is within the grassland region.

END