

Geography III

022

29/07/2024 08 :30 AM – 11 :30 AM



ADVANCED LEVEL NATIONAL EXAMINATIONS, 2023-2024

SUBJECT: GEOGRAPHY III

PAPER III: PHYSICAL GEOGRAPHY

DURATION: 3 HOURS

COMBINATIONS:

- HISTORY–ECONOMICS- GEOGRAPHY (**HEG**)
- MATHEMATICS –ECONOMICS- GEOGRAPHY (**MEG**)
- MATHEMATICS –PHYSICS – GEOGRAPHY (**MPG**)
- BIOLOGY-CHEMISTRY- GEOGRAPHY (**BCG**)
- LITERATURE IN ENGLISH -ECONOMICS- GEOGRAPHY (**LEG**)
- HISTORY- GEOGRAPHY- LITERATURE IN ENGLISH (**HGL**)

Instructions to candidates:

- 1) Do not open this question paper until you are told to do so.
- 2) Write your names and index number as they appear on your registration form and **DO NOT** write your names and index number on additional answer sheets if provided.
- 3) This paper consists of **THREE** sections **A**, **B** and **C**.
 - Section A:** This section is compulsory. **(55 marks)**
 - Section B:** Attempt any **TWO** questions. **(30 marks)**
 - Section C:** Attempt only **ONE** question. **(15 marks)**
- 4) Use a **blue** or **black** pen.

Section A: Attempt all questions. (55 marks)

- 1) a) Choose the best answer among the alternatives given.
- i) The lines running from North to South numbered Eastward are called: **(2 marks)**
- a) Grids
 - b) Northings
 - c) Eastings
 - d) All the above are correct
- ii) The steep areas on a topographic map are shown by: **(2 marks)**
- a) Contours are far apart.
 - b) A river flows into a lake.
 - c) Contours bend.
 - d) Contours are closest together.
- b) Complete the statements below with the following concepts:
(Northings, Eastings).
- When locating a feature on a map using four or six figure grid reference, theare first identified then followed by the **(2 marks)**
- 2) Define the following three major types of tectonic plate boundaries (convergent, divergent and transform or neutral) by filling appropriately the following sentences. **(3 marks)**
- i) is the boundary created where plates move towards each other.
 - ii)is the boundary created where plates move to different directions or spread apart.
 - iii) is the boundary created where plates slide past one another.
- 3) Aerosols are defined as: **(2 marks)**
- a) The suspended solid particles and liquid droplets.
 - b) These particles are from various sources like volcanic eruption, desert dust, spores, sewage, but not pollen.
 - c) The suspended solid particles and liquid droplets, that are from various sources like volcanic eruption, desert dust, spores and pollen.
 - d) None of the above is correct.

4) Match the vegetation types in Rwanda with their ecological importance.

(3 marks)

A. Vegetation type in Rwanda	B. Ecological importance
a) Savannah woodlands and grasslands b) Mountain volcanoes forest c) Tropical rainforest	i) Provides habitat for endangered mountain gorillas. ii) Helps to regulate water flow in rivers and streams. iii) Support diverse wildlife, including elephants, buffalo, lions and antelopes.

5) Define the following three types of river rejuvenation (Static rejuvenation, Dynamic rejuvenation and Eustatic rejuvenation), by linking each of them to its right definition: **(3 marks)**

- a)occurs because of the changes in the sea level due to diastrophic events (subsidence of sea floor or rise of coastal land) and glaciations causing fall in sea level.
- b) is mainly caused by uplifting in the landmass, tilting of land area and lowering of the outlet.
- c) is mainly caused by the decrease in the river load, increase in water volume of the main river due to river capture and consequent stream discharge due to increased rainfall.

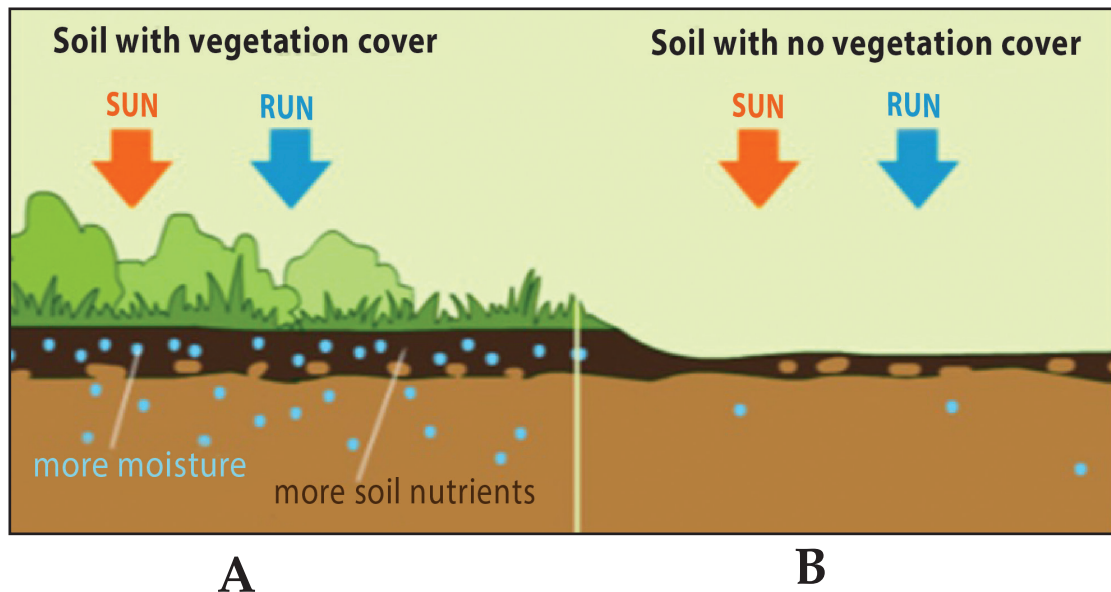
6) Relate each type of weathering (Physical and Biological) to its explanation among the statements below. **(4 marks)**

- a) weathering is a process of rock disintegration (decay) due to the influence growing plants and animals.
- b) When it changed only physical properties of rock, it is referred to weathering.

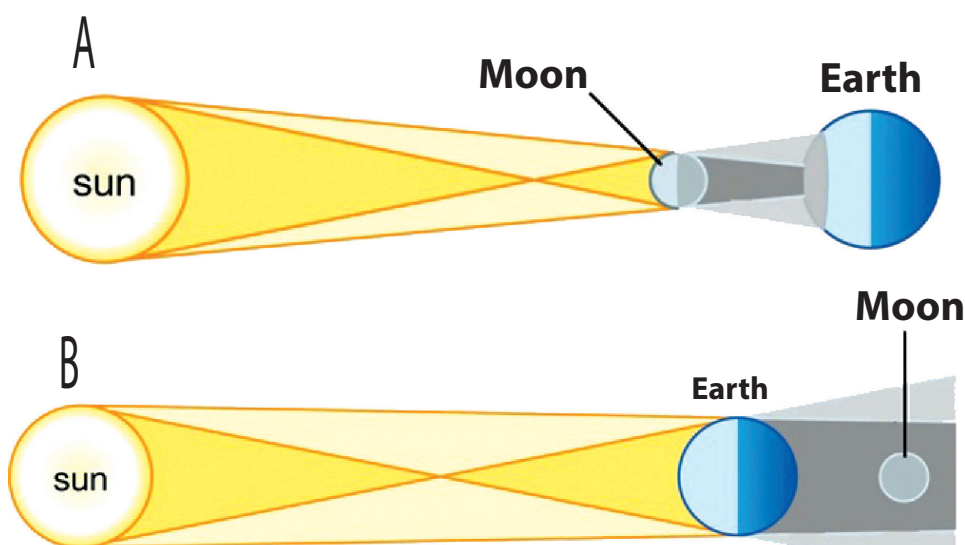
7) Use the list below showing the three (3) explosive types of volcanoes and link them to their appropriate descriptions: Strombolian type of volcanoes, Vulcanian type of volcanoes and Hawaiian type of volcanoes. **(6 marks)**

- a) are volcanoes that erupt quietly due to less viscous lava and non-violent gas. A good example is Nyiragongo of DRC.
- b) are volcanoes that erupt with moderate intensity. Besides lava, other volcanic materials like pumice, scoria and bombs are also ejected into the sky. For example, Stromboli in Italy.
- c) are volcanoes that erupt with great force and intensity. The lava is so viscous and pasty that it quickly solidifies and hardens. They crust over the volcanic vents. For example, Lipari in the Mediterranean Sea.

- 8) a) Differentiate a rock from a mineral. **(4 marks)**
 b) Identify any two reasons that explain why soil texture is important. **(2 marks)**
- 9) Study the illustration given below and then answer the questions that follow.



- i) Which area is mostly affected by soil erosion? **(1 mark)**
 ii) Explain how you would solve the problems faced by people living in part **B** of the illustration. **(3 marks)**
- 10) With the help of a diagram, differentiate tombolo from bar as landforms produced by wave deposition. **(4 marks)**
- 11) Identify the types of eclipse represented by the diagrams **A** and **B** shown below. **(4 marks)**



12) Demonstrate the influence of a slope and the nature of rocks towards the formation of karst/limestone landforms. **(4 marks)**

13) Examine any three (3) effects of climate change in Rwanda. **(6 marks)**

Section B: Attempt two questions only (30 marks)

14) (a) Evaluate the problems that are associated with tectonic processes in Rwanda. **(6 marks)**

(b) Explain any three theories that explain the formation of the rift valley. **(9 marks)**

15) Study the photograph below and answer the questions that follow.



a) Name the process that is taking place in the above photo. **(1 mark)**

b) List any four (4) relief features found in Rwanda where such process occurred many years ago. **(4 marks)**

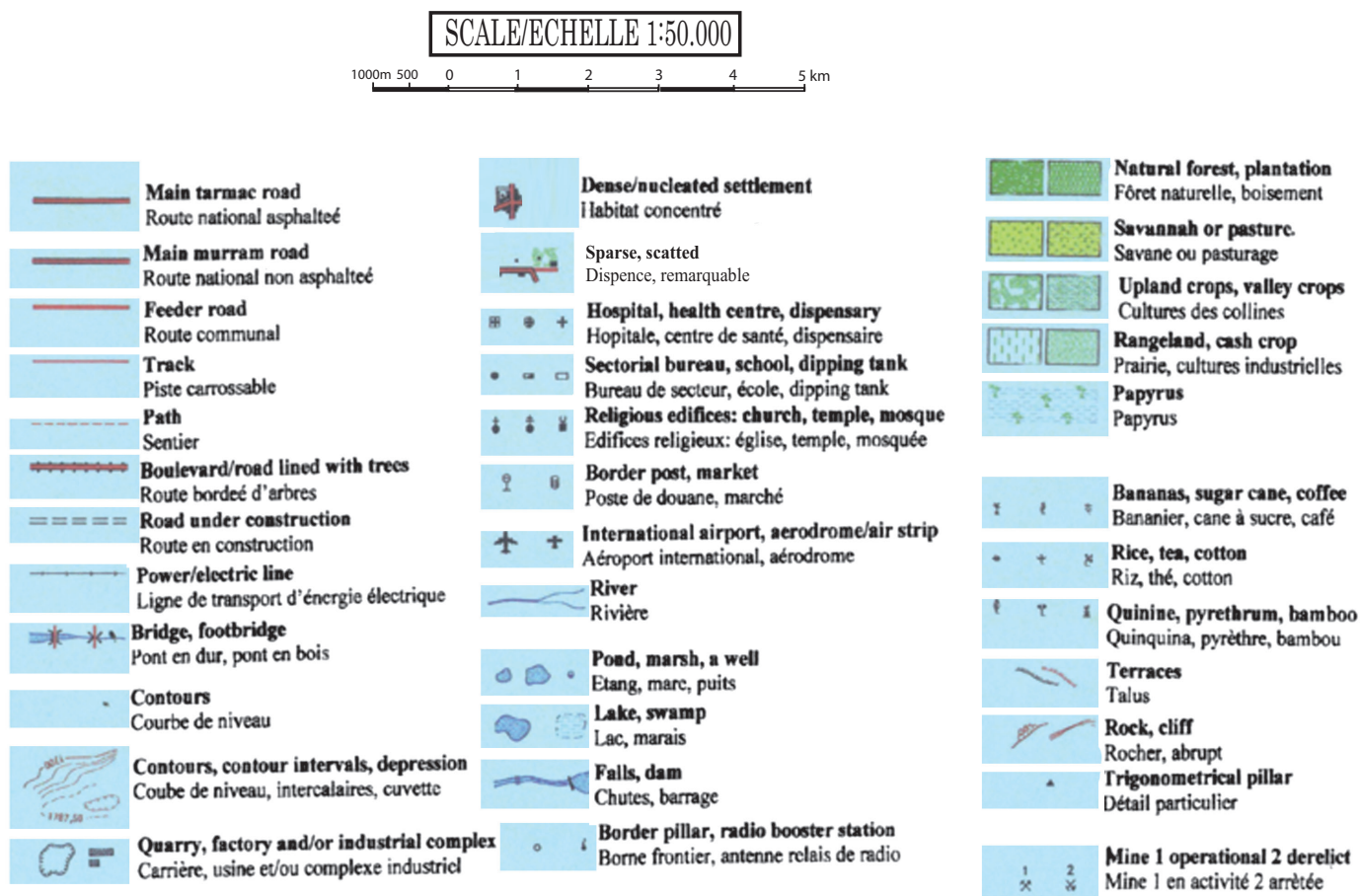
c) Analyze the importance of the mentioned features in b) above on the environment and economic development of Rwanda. **(10 marks)**

16) Explain the meaning of a drainage system and then evaluate the relationship between drainage systems and human activities. **(15 marks)**

Section C: Attempt only one question (15 marks)

17) Study the topographic map provided below and then answer the questions that follow.





Scale: 1:50,000

- Using six figure grid references, determine the location of point **P** on the above map. **(2 marks)**
- Measure the distance in km of the line **XY** drawn in the middle part of the map. **(2 marks)**
- Describe the relief of Bwishyura located in the southern part of the map above. **(3 marks)**
- Suggest any five (5) economic activities that may take place in North Eastern part of the map. **(5 marks)**
- Calculate the area of the lake visible in North Eastern part of the map.

18) Study the photograph below and answer the questions that follow. **(15 marks)**



- a) Identify the economic activity that is taking place in the middle ground of the photo. **(2 marks)**
- b) What type of mineral is being extracted in the area shown in the photo? **(1 mark)**
- c) Suggest any five factors that favour the activity identified in (a). **(5 marks)**
- d) Identify the problems the activity identified in (a) above is likely to face? **(5 marks)**
- e) Giving reasons for your answer, suggest an area in Rwanda where this photograph could have been taken from. **(2 marks)**

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