

Geography III

023

19 Nov. 2012 8.30am - 11.30 am

REPUBLIC OF RWANDA



RWANDA EDUCATION BOARD (REB)

ADVANCED LEVEL NATIONAL EXAMINATION 2012

SUBJECT: GEOGRAPHY

PAPER III: PHYSICAL GEOGRAPHY



COMBINATION: HISTORY-GEOGRAPHY-ECONOMICS (HEG)
MATHEMATICS-ECONOMICS-GEOGRAPHY (MEG)
MATHEMATICS-PHYSICS-GEOGRAPHY (MPG)
BIOLOGY-CHEMISTRY-GEOGRAPHY (BCG)
LITERATURE-ECONOMICS-GEOGRAPHY (LEG)
HISTORY-GEOGRAPHY-LITERATURE (HGL)

DURATION: 3 HOURS

INSTRUCTIONS:

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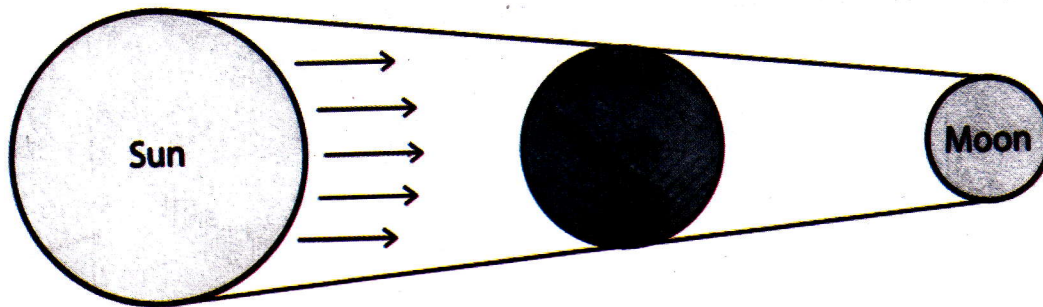
This paper consists of **THREE** sections **A, B and C**

Section A: answer All questions	(55 marks)
Section B: answer THREE questions of your choice	(30 marks)
Section C: answer ONE questions of your choice	(15 marks)

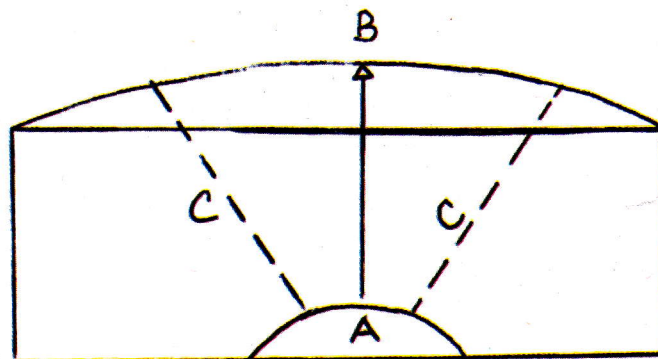
SECTION A: ANSWER ALL QUESTIONS (55 marks)

1. a) At which latitude is the sun directly overhead at noon in the winter solstice? **(1 mark)**
- b) At which latitude is the sun directly overhead at noon on equinox? **(1 mark)**

2. Study the diagram below and answer the questions that follow



- a) What is an eclipse? **(2 marks)**
 - b) What type of eclipse is shown in the picture above? **(2 marks)**
3. a) Draw a diagram of the structure of the atmosphere showing different layers and the variation of temperature. **(2 marks)**
 - b) Explain the cause of the rise in temperature in the stratosphere. **(2 marks)**
4. a) Identify any three processes of soil formation. **(3 marks)**
 - b) Describe any two components of soil. **(2 marks)**
 - c) Using diagrams, differentiate the term soil profile and soil catena. **(2 marks)**
 - d) Describe two causes of soil erosion in Rwanda. **(2 marks)**
5. Study the following diagrams showing the origin of an Earthquake and answer the questions that follow.



- a) Name different parts A, B and C. **(3 marks)**
- b) Explain parts A and B. **(2 marks)**
- c) What is the difference between Earthquake and Tsunami? **(2 marks)**

6. Study the diagram below showing highlands of Africa and answer the questions that follow.

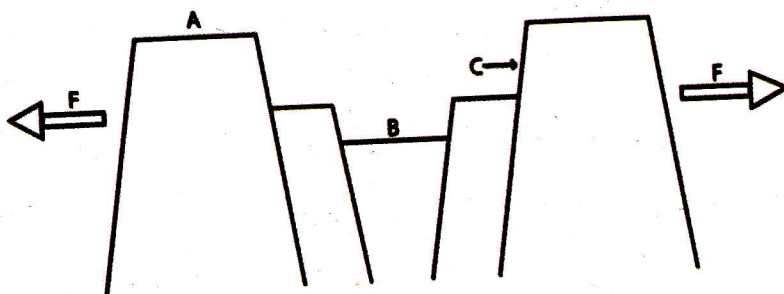


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- a) Name the highlands marked A, B, C, D and E. **(2 marks)**
- b) Explain how the highlands marked A were formed. **(2 marks)**
- c) Give the cash crop which is most grown in the Highlands E. **(1 mark)**

- 7. a) Differentiate chemical weathering from physical weathering. **(2 marks)**
- b) Explain factors influencing weathering. **(5 marks)**
- c) Name any three positive effects of weathering to man. **(3 marks)**

8. Study the following diagram showing a fault and answer the questions that follow.



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- a) Name the parts marked A, B and C. **(2 marks)**
- b) Name the force F. **(1 mark)**
- c) Describe two positive effects of faulting. **(2 marks)**

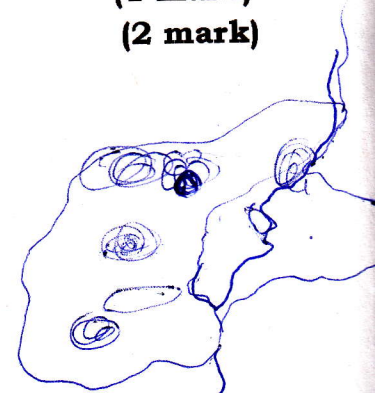
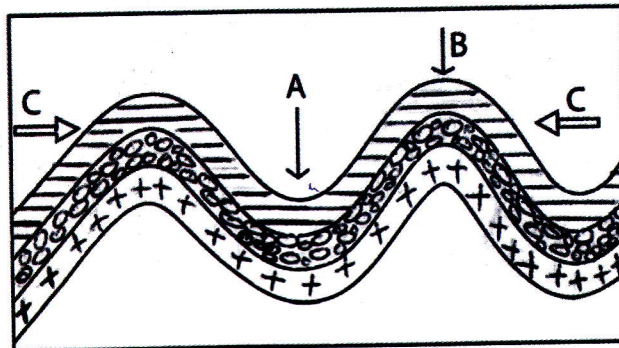
9. Study the diagram below and answer the questions that follow.

- Name the structure which is represented.
- Name the forms A and B on the diagram.
- Which type of force is shown by C?

(1 mark)

(1 mark)

(2 mark)



10. Draw a sketch map of Rwanda and on it mark and name:

- River Nyabarongo and River Akanyaru
- Birunga range
- Akagera National Park
- Nyungwe forest and Gishwati forest.
- Lake Muhazi and Lake Ruhondo

(1 mark)

(1 mark)

(1 mark)

(1 mark)

(1 mark)

SECTION B: ATTEMPT ANY THREE QUESTIONS (30 MARKS)

- Explain two ways in which wind erosion takes place. *dellation, abrasion.*
 - Explain any two landforms related to wind erosion.
 - What is an inselberg?
 - Explain four positive effects of wind related landforms.

(2 marks)

(2 marks)

(2 marks)

(4 marks)

- With reference to the East African Coast, state and explain types of Corals reefs.
 - Outline three conditions necessary for growth of coral reefs.
 - Explain four possible positive effects of coral reefs on human activities along the coast.

(3 marks)

(3 marks)

(4 marks)

(4 marks)

- What is mass wasting?
 - State and explain four types of mass wasting.
 - Explain four effects of mass wasting to man.

(2 marks)

(4 marks)

(4 marks)

14. Glacial erosion has been responsible for the formation of the most dramatic sceneries in the world.

- Explain the major types of glacial erosion.
- Explain the ways in which glacial erosion takes place.

(4 marks)

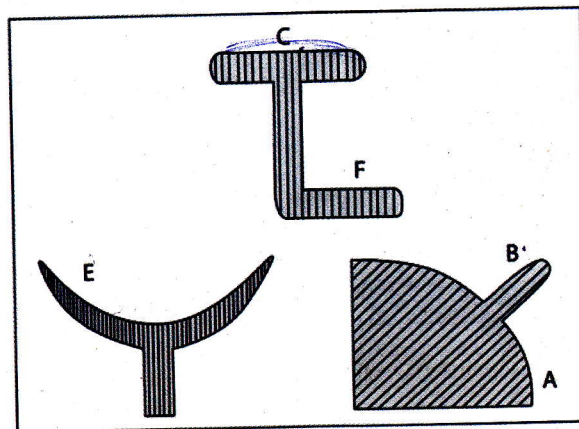
(6 marks)

15. a) Explain seven effects of climatic changes. (7 marks)

b) Complete the table below. (3 marks)

Element of climate	Measuring Instrument	Lines joining places which receive the same amount of element of climate
Pressure		
Temperature		
Rainfall		

16. Study the diagram of intrusive volcanic features below and answer the questions that follow.



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a) Name and explain the feature A, B, C, E and F. (5 marks)

b) Explain the formation of any three extrusive volcanic features. (3 marks)

c) Give any two areas of the world that are affected by volcanic activity. (2 marks)

SECTION C: ANSWER only ONE QUESTION OF YOUR CHOICE (15 marks)

17. Study the map extract of Zaza and answer the questions that follow.

a) i. Give a six figure grid reference for the church of Murama to the north of the map. (2 marks)

ii. Name the man-made feature at grid reference 311781. (2 marks)

b) i. Calculate the area to the north of northing 75 and west of easting 30 in km². (2 marks)

ii. Calculate the length of the section marked X-Y on the main road in km. (2 marks)

c) Draw the cross section of the line marked on the map from West to East. (3 marks)

d) i. What are the problems of the settlement found on the map? (2 marks)

ii. Which areas are less populated on the map? (2 marks)

















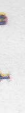



















ZAZA

RWANDA 1:50,000



SCALE/ECHELLE 1:50,000



	Main tarmac road Route nationale asphaltée		Dense/nucleated settlement, sparse, scattered Habitat concentré, dispersé, remarquable		Natural forest, plantation Forêt naturelle, boisement
	Main murrum road Route nationale non asphaltée		Hospital, health centre, dispensary Hopitale, centre de santé, dispensaire		Savannah or pasture Savane ou pasturage
	Feeder road Route communal		Sectorial bureau, school, dipping tank Bureau de secteur, école, dipping tank		Upland crops, valley crops Cultures des collines
	Track Piste carrossable		Religious edifices: church, temple, mosque Edifices religieux: église, temple, mosquée		Rangeland, cash crop Prairie, cultures industrielles
	Path Santier		Border post, market Poste de douane, marché		Papyrus Papyrus
	Boulevard/road lined with trees Route bordée d'arbres		International airport, aerodrome/air strip Aéroport international, aérodrome		Bananas, sugar cane, coffee Bananier, canne à sucre, café
	Road under construction Route en construction		River Rivière		Rice, tea, cotton Riz, thé, coton
	Power/electric line Ligne de transport d'énergie électrique		Pond, marsh, a well Etang, mare, puits		Quinine, pyrethrum, bamboo Quinquina, pyrèthre, bambou
	Bridge, footbridge Pont en dur, pont en bois		Lake, swamp Lac, marais		Terraces Talus
	Coastours Courbe de niveau		Falls, dam Chutes, barrage		Rock, cliff Rocher, abrupt
	Contours, contour intervals, depression Courbe de niveau, intercalaires, cuvette		Border pillar, radio booster station Borne frontiere, antenne relais de radio		Trigonometrical pillar Détail particulier
	Quarry, factory and/or industrial complex Carrière, usine et/ou complexe industriel				Mine 1 operational 2 derelict Mine 1 en activité 2 arrêtée

18. Study the photograph below and answer the following questions.



- a) Identify three man-made features shown in the photograph. **(3 marks)**
- b) Name the crop found in the right foreground of the photograph. **(1 mark)**
- c) Name the vegetation located in the background of the photograph. **(2 marks)**
- d) Name two districts of Rwanda where this photograph might have been taken. **(2 marks)**
- e) i) Describe the relief shown in the photograph. **(2 marks)**
ii) State two problems this place might be facing. **(2 marks)**
iii) State three advantages of this place to the population around. **(3 marks)**