

# Geography I

## 005

16/11/2015 08.30AM - 11.30AM

# YEAR 2015

### ORDINARY LEVEL NATIONAL EXAMINATIONS, 2015

**SUBJECT : GEOGRAPHY**

**PAPER 1 : PHYSICAL GEOGRAPHY**

**DURATION : 3 HOURS**

#### INSTRUCTIONS:

1. Write your names and index number on the answer booklet as they appear on your registration form and **DO NOT** write your names and index number on additional answer sheets of paper if provided.

2. Do not open this question paper until you are told to do so.

3. This paper has **THREE** sections **A, B** and **C**.

**SECTION A:** Attempt **ALL** question.

**(55 marks)**

**SECTION B:** Attempt any **THREE** questions

**(30 marks)**

**SECTION C:** Attempt **ONLY ONE** question.

**(15 marks)**

4. Use a blue or black pen only.

**SECTION A: ATTEMPT ALL QUESTIONS. (55 MARKS)**

- 1) (a) What is a weather station? (1 mark)  
 (b) State three factors to be considered when setting up a weather station? (3 marks)
- 2) Name two types of fog. (2 marks)
- 3) Outline two characteristics of the thermosphere/ionosphere. (3 marks)
- 4) Give three reasons why the length of day and night differ at different times of the year. (3 marks)
- 5) (a) What is meant by the term eclipse? (1 mark)  
 (b) With the help of a diagram, explain how a lunar eclipse occurs. (5 marks)
- 6) What is the name of an instrument used in measuring the rate of evaporation? (1 mark)
- 7) Describe the two types of aerial photographs below:  
 (a) Vertical aerial photographs. (2 marks)  
 (b) Oblique aerial photographs. (2 marks)
- 8) With the help of a diagram, describe how a Rain gauge is measured. (8 marks)
- 9) Describe three features of minerals. (3 marks)
- 10) Explain how the following factors affect chemical weathering:  
 (a) Steep slopes (2 marks)  
 (b) High elevation (2 marks)
- 11) Briefly describe three characteristics of Cirrus-clouds. (3 marks)
- 12) Copy and complete the following table of organically formed sedimentary rocks. (6 marks)

Types of organically formed sedimentary rocks	Formation process	Examples
Calcareous		
Siliceous		
Ferruginous		

- 13) Explain two types of earth movements. (6 marks)
- 14) Briefly describe three causes of earth movements. (3 marks)

**SECTION B: ATTEMPT ANY THREE QUESTIONS. (30 MARKS)**

15) (a) Define the term "fault steps".

(2 marks)

(b) Describe two theories that have been advanced to explain the formation of rift valley: (8 marks)

16) The table below shows climatic characteristics of one station in Africa

Month	Temperature (°C)	Rain fall (mm)
January	20	118
February	20	118
March	18	75
April	16	61
May	13	22
June	10	9
July	10	8
August	13	10
September	16	25
October	18	69
November	18	116
December	19	117

(a) Draw a suitable graph to represent the climate of the station.

(4 marks)

(b) Briefly explain the climatic characteristics of the climate represented by the data in the table.

(3 marks)

(c) (i) In which hemisphere is the station likely to be located?

(1 mark)

(ii) Give a reason for your answer in (c) (i)

(1 mark)

(iii) Name a place in Africa that could be represented by the data.

(1 mark)

17. Explain the advantages and disadvantages of vegetation forest in Rwanda.

(10 marks)

18. (a) Differentiate slow mass wasting from rapid mass wasting, and give examples of each type of mass wasting.

(4 marks)

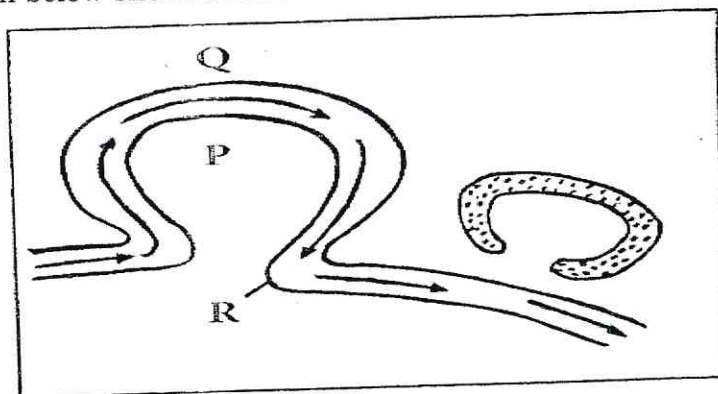
(b) Explain three ways in which soil creep occurs.

(3 marks)

(c) Describe three effects of mass wasting on physical and human environment.

(3 marks)

19. The diagram below shows river meanders. Use it to answer questions (a) and (b).



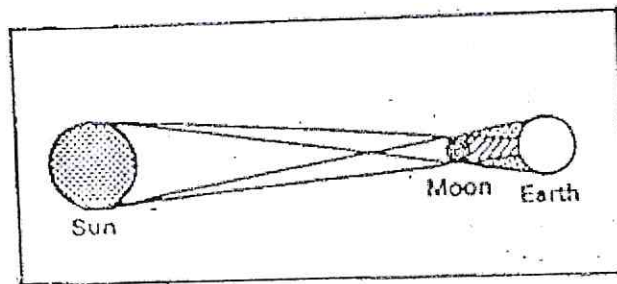
- (a) Name the processes that take place at point P and Q.  
 (b) Name the features formed at point R  
 (c) Explain two causes of rejuvenation  
 (d) Outline three characteristics of old stage of river.

(2 marks)  
 (1 mark)  
 (4 marks)  
 (5 marks)

## GEOGRAPHY I (PHYSICAL GEOGRAPHY) MARKING GUIDE, 2015

### SECTION A

- a) A weather station is a place where instruments, reading and recording of weather elements are taken.  
 b) It should be in an open ground, the place should be secured from intruders, it should be away from buildings, vegetation and other relief features, the area should experience free flow of air, the site should be in a relatively flat area, not affected by floods or any surface runoff that may pose a threat to the instruments and for ease of installation and reading.
- Hill fog, advection fog, radiation fog, frontal fog, steam fog.
- It contains electrons and ions, it is furthest in the atmosphere layer, temperatures rise rapidly with increase in height, gases are ionized by the incoming solar radiation, thus experience radio waves effect, atomic oxygen absorbs the incoming short ultraviolet radiation from the sun.
- The apparent movement of the sun between the northern and southern hemisphere determines the length of the day and the night.
  - On 21<sup>st</sup> June, the sun is overhead along the tropic of cancer.
  - Regions along the equator have longer daytimes and nights.
  - Regions north of the equator have a longer day and a shorter night.
  - Day time increases towards the north Pole until a continuous 24 hours a day.
  - The southern region at this time experiences shorter days than the nights.
  - On the 22<sup>nd</sup> of December, the sun is overhead at the tropical of Capricorn.
  - At the northern hemisphere, the day becomes shorter towards the Northern pole.
  - Revolution of the earth, the earth's spherical shape, inclination of the earth on its axis etc.
- a) An eclipse is a shadow formed when the sun's rays are blocked from reaching the surface of the earth of the moon.



- b) A Lunar eclipse occurs during the revolution of the earth when the earth comes between the moon and the sun, the sun's shadow cast the moon and at times it might pass unnoticed when occurs at night.
- Evaporimeter or atmometer.
- a) Vertical aerial photograph: The camera is focused vertically on the area above the object, the camera lens focuses vertically on the area before the photograph is taken.  
 b) Oblique aerial photograph: The camera is tilted at an angle while taking the photograph, it covers a relatively large area, its mostly taken from low flying objects like aircrafts, objects near the camera larger than those far away.
- Omitted.