ORDINARY LEVEL NATIONAL EXAMINATIONS, 2014

SUBJECT : GEOGRAPHY

PAPER I : PHYSICAL GEOGRAPHY

DURATION : 3 HOURS

INSTRUCTIONS:

1. Do not open this question paper until you are told to do so.
2. Write your name and index number as they appear on your registration form.
3. This paper has Three sections : A and B and C.
   
   SECTION A: This section is compulsory. (55 marks)
   SECTION B: Attempt any THREE questions. (30 marks)
   SECTION C: Attempt only one question. (15marks)
4. Use blue or black pen.
SECTION A : ATTEMPT ALL QUESTIONS. (55 marks)

1. Identify units for measuring the following elements of weather:
   (a) Wind speed
   (b) Amount of cloud
   (c) Air pressure

2. Mention two types of aerial photographs.

3. How is geography related to mathematics?

4. Name two brightest heavenly bodies in the sky.

5. What are the two kinds of Eclipses?

6. What causes time difference between longitudes?

7. (a) What is meant by a leap year?
   (b) How does a leap year come about?

8. Describe three forms of rainfall.

9. Name tropics named 30°S and 30°N in the following map.

10. (a) Describe the three characteristics of Birunga forests.
    (b) Explain the benefits of Birunga forest to the population living nearby.

11. Identify the river features labeled as A, B, C and D.
12. Give the names of the following drainage patterns. (3 marks)

(a)  
(b)  
(c)  

13. (a) Briefly explain the process of vulcanicity. (4 marks)

(b) What are the mineral constituents of SIAL and SIMA? (4 marks)

14. Below are the names of the three types of rocks: sedimentary, igneous, metamorphic. Copy the table and write the three names alongside the correct definition. (3 marks)

<table>
<thead>
<tr>
<th>DEFINITION</th>
<th>TYPE OF ROCK</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) A rock type which has been changed by heat and or pressure</td>
<td></td>
</tr>
<tr>
<td>b) A rock type which may have been deposited under water</td>
<td></td>
</tr>
<tr>
<td>c) A rock type that was once molten</td>
<td></td>
</tr>
</tbody>
</table>

15. (a) Draw a fold structure and name its three main parts. (3 marks)

(b) Name two African areas where fold mountains are found. (2 marks)

16. (a) Name the type of vegetation dominant in the western part of Rwanda. (1 mark)

(b) What are the characteristics of the type of vegetation mentioned in (a) above. (3 marks)

(c) Explain two factors responsible for the existence of the vegetation. (2 marks)
SECTION B : ATTEMPT ONLY THREE QUESTIONS. (30marks)

17. (a) Explain the ways in which the lakes below were formed. (3marks)

(i) Lake Kivu
(ii) Lake Rweru
(iii) Lake Ruhondo

(b) Explain with relevant examples the uses of different lakes in Rwanda. (7marks)

18. (a) Name two countries crossed by river Rhine. (2marks)

(b) Name capital city of one of countries named in (a) above. (1mark)

(c) Explain how useful the river Rhine is to the population of countries mentioned in (a) (4marks)

(d) Explain problems associated with the existence of river Rhine. (3marks)

19. (a) Name the type of soils found in the Birunga region. (1mark)

(b) Explain 4 causes of soil erosion in the area mentioned in (a) above. (4marks)

(c) Describe different ways of keeping the soil from being eroded. (5marks)

20. (a) Name the dominant rain forest in parts of South America. (1mark)

(b) Identify three countries that are occupied by the forest mentioned in (a) above. (3marks)

(c) Describe the characteristics of the rain forest in (a) above. (3marks)

(d) Explain factors responsible for the existence of the rain forest said in (a) above. (3marks)

21. (a) Name two rivers that meet to form river Akagera. (2marks)

(b) Name the water fall found on the river Akagera. (1mark)

(c) Explain four uses of the fall mentioned in (b) above. (4marks)

(d) Describe the importance of the Akagera swamp to the population of the area. (3marks)

22. (a) Mention two largest rivers of China. (2marks)

(b) Name the highest peak in the world and the mountain range where it is found. (2marks)

(c) Mention the mountain range that separates Europe and Asia. (1mark)

(d) Explain the importance of high mountains mentioned in (a). (5marks)
SECTION C: ATTEMPT ONLY ONE QUESTION OF YOUR CHOICE. (15marks)

23. Study the map extract of KABARONDO and answer the questions that follow :

(a) (i) Identify the highest and the lowest altitude of the area covered by the map.  
     (2marks)

(iii) Compare the relief of Nyakabungo to that of Rurenge.  
     (2marks)

(b) (i) Identify the type of settlement in the map and give evidence to support your answer.  
     (2marks)

(ii) Identify the man made feature shown on grid reference 4775500  
     (1mark)

(iii) What are two types of scale used on the map?  
     (2marks)

(c) Name two economic activities of the area covered by the map.  
    (2marks)

(d) (i) Mention two main functions in the Kabarondo centre.  
    (2marks)

(ii) Measure the distance in km of the feeder road of Bitoma from the grid reference 560500 to the main murrum road of Kabarondo.  
    (2marks)
Topographic Map of Rwanda: Kabarondo

Source:
Topographic map of Rwanda in 43 sheets at 1/50000 scale was produced by IGN in 1989. The hardcopy maps were scanned and georeferenced by MSR in 2006.

Geographic Coordinate system:
Coordinate system: ITRF 2005
Projection: Transverse Mercator
Datum: ITRF 2005

Scale/Échelle
1:25,000

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<table>
<thead>
<tr>
<th>Symbol</th>
<th>Feature Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main tarmac road</td>
<td>Dense/uncultivated settlement, sparse, scattered; Habitation concentré, dispersé, remarquable</td>
</tr>
<tr>
<td>Route nationale asphaltée</td>
<td>Large asphalt road</td>
</tr>
<tr>
<td>Main murram road</td>
<td>Hospital, health centre, dispensary; Hospital, centre de santé, dispensaire</td>
</tr>
<tr>
<td>Route nationale non asphaltée</td>
<td>Sectorial bureau, school, dipping tank; Bureau de secteur, école, dépôt d'eau</td>
</tr>
<tr>
<td>Feeder road</td>
<td>Religious edifices: church, temple, mosque; Édifices religieux: église, temple, mosquée</td>
</tr>
<tr>
<td>Route communale</td>
<td>Border post, market; Poste de douane, marché</td>
</tr>
<tr>
<td>Track</td>
<td>International airport, aerodrome/air strip; Aéroport international, aérodrome</td>
</tr>
<tr>
<td>Piste carrossable</td>
<td>River</td>
</tr>
<tr>
<td>Path</td>
<td>Pond, marsh, a well; Étang, mare, puits</td>
</tr>
<tr>
<td>Sentinel</td>
<td>Valley</td>
</tr>
<tr>
<td>Boulevard/road lined with trees</td>
<td>Upland crops, valley crops; Cultures des collines, cultures de fond de vallée</td>
</tr>
<tr>
<td>Route bordée d'arbres</td>
<td>Papyrus</td>
</tr>
<tr>
<td>Road under construction</td>
<td>Rangeland, cash crops; Prairies, cultures industrielles</td>
</tr>
<tr>
<td>Route en construction</td>
<td>Banana, sugar cane, coffee; Bananier, canne à sucre, café</td>
</tr>
<tr>
<td>Power/electric line</td>
<td>Rice, tea, cotton; Riz, thé, coton</td>
</tr>
<tr>
<td>Ligne de transport d'énergie électrique</td>
<td>Quinine, pyrethrum, bamboo; Quinquina, pyrèthre, bambou</td>
</tr>
<tr>
<td>Bridge, footbridge</td>
<td>Terraces</td>
</tr>
<tr>
<td>Pont en dur, pont en bois</td>
<td>Talus</td>
</tr>
<tr>
<td>Contours</td>
<td></td>
</tr>
</tbody>
</table>
24. Study the photo below and answer the questions that follow.

![Image of a flooded street with people and vehicles]

a) (i) Name the type of transport shown on the photograph. (1 mark)
(ii) Give reasons to support the answer given in (a) (i) above. (2 marks)
(iii) Describe the type of vegetation in the background. (2 marks)

b) Examine the problems facing the type of transport indicated in (a) (i) above. (5 marks)

c) Suggest possible strategies which the government of Rwanda could use to solve or minimize on the transport problems examined in (b) above. (5 marks)