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**312/1**  
**GEOGRAPHY**  
**PAPER 1**  
**July/August 2010**  
**2 ¾ HOURS**

**BORABU/MASABA NORTH DISTRICTS JOINT EVALUATION TEST – 2010**  
**Kenya Certificate of Secondary Education (K.C.S.E)**

**GEOGRAPHY**  
**PAPER 1**  
**July/August 2010**  
**2 ¾ HOURS**

**Instructions to Candidates**

- This paper consists of two sections A and B.
- Answer ALL questions in section A.
- In section B answer question 6 and any other two questions.
- All answers must be written in the answer sheets provided.

*This paper consists of 4 printed pages. Candidates should check carefully to ascertain that all the pages are printed as indicated and no questions are missing.*

## SECTION A.

**Answer ALL questions in this section.**

1. a) State three effects of the rotation of the earth on its axis. (3mks)  
b) What is the time at point Y 30° W when the time at point Z 20° E is 4.00 pm. (2mks)
2. a) What do you understand by the following terms.  
i) Solar system. (2mks)  
ii) Weather station. (2mks)  
b) State one type of seismic waves. (1mk)
3. a) i) Name one agent of biological weathering. (1mk)  
ii) Classify igneous rocks according to their chemical composition. (2mks)  
b) Give two examples of Horst Mountains in East Africa. (2mks)
4. a) i) Identify any two types of river erosion. (2mks)  
ii) State one condition which may favour a river capture process. (1mk)  
b) Draw a well labeled diagram of a radial drainage pattern. (2mks)
5. a) State two causes of submergence of coasts. (2mks)  
b) i) Distinguish between vulcanicity and volcanicity. (2mks)  
ii) State one characteristic of faulted Lakes. (1mk)

## SECTION B.

**Answer question 6 and any other two questions in this section.**

6. Study the map of Belgut 1:50,000 (sheet 117/3) provided and answer the following questions.  
a) i) Convert the representative fraction scale of the map extract into a statement scale. (1mk)  
ii) Give the six-figure grid reference of Kabirigut bridge. (1mk)  
iii) Measure the length of the loose surface road from the junction at Namba shops (grid reference 231538) to its Southern end towards Ikonge and Sotik.. Give your answer in Kilometres. (2mks)  
iv) What is the longitudinal extent of the area covered by the map extract. (1mk)  
b) i) Give one method used in representing relief on the map extract. (1mk)  
ii) What is the approximate height of the hill in Kodumo East at grid square 2355. (1mk)  
iii) Calculate the bearing of Cheptuyey school grid reference 290469 from Ikamu school grid reference 261482. (2mks)  
c) Using a vertical scale of 1cm to represent 20m.  
i) Draw a cross-section along Northing 50 from grid reference 230500 to grid reference 300500. (4mks)

- ii) on the cross-section, mark and name the following:
- Loose surface road.
  - River Sondu
  - Foot path. (3mks)
- iii) Calculate the vertical exaggeration of your cross-section. (2mks)
- d) i) State the vertical interval of the area covered by the map. (1mk)
- ii) Explain how relief has influenced settlement in the area covered by the map. (4mks)
- iii) Calculate the area enclosed by the loose surface roads running from Marumbasi junction, through Kiptere junction, Kabirigut bridge to the junction at grid reference 281561. (2mks)
7. a) Give two processes through which wind erodes the earth's surface. (2mks)
- b) Explain three ways through which wind transports its load. (6mks)
- c) With the aid of well labeled diagrams, describe the formation of the following desert features.
- i) Rock pedestal. (5mks)
  - ii) Barchan (5mks)
- d) You are supposed to carry out a field study of a semi-arid area in Kenya.
- i) State two ways through which you would prepare yourself for the field study. (2mks)
  - ii) List two land forms resulting from water action you are likely to find in the area. (2mks)
  - iii) State three measures you would recommend to be put in place to control desertification in the area. (3mks)
8. a) State three characteristics of the inter-tropical convergence zone (ITCZ). (3mks)
- b) With the aid of a well labeled diagram describe how relief rainfall is formed. (6mks)
- c) State five characteristics of the hot desert climate. (5mks)
- d) You are required to carry out a field study to determine the relationship between climate and vegetation in your district.
- i) Give three reasons why you would need the map of the district. (3mks)
  - ii) Name two sampling techniques you are likely to use during the field study. (2mks)
  - iii) Give two reasons why sampling would be appropriate for this field study. (2mks)
  - iv) State four methods you would use to record data during the field study. (4mks)
9. a) State two types of earth movements. (2mks)
- b) List three causes of earth movements. (3mks)
- c) Describe the theory of plate tectonics. (6mks)
- d) i) Give three theories which help to explain the formation of fold mountains. (3mks)

- ii) What do you understand by the following terms as used in the study of earthquakes.
- Seismic focus. (2mks)
  - Epicentre (2mks)
  - Seismic zones (2mks)
- e) Form Four Students from a school in North Masaba and Borabu districts set out for a field study in an area which had experienced an earthquake. Within the Rift Valley Province.
- i) State two objectives they are likely to have formulated. (2mks)
- ii) Give three problems they might have encountered in the course of their study. (3mks)
10. What is:
- i. A soil profile. (2mks)
  - ii. A soil catena (2mks)
  - iii. Glacier (2mks)
- b) By the aid of a well labeled diagram, describe a soil profile. (8mks)
- c) Explain two processes of glacial erosion. (4mks)
- d) You are asked to carry out a field study on a glaciated lowland area.
- i. State three features of glacial deposition you are likely to identify. (3mks)
  - ii. Which methods of data presentation are you likely to use. (4mks)