**312/ 1**

**GEOGRAPHY**

**PAPER 1**

**OCTOBER/NOVEMBER 2014**

**2 ¾ Hours**

**MBOONI EAST SUB – COUNTY FORM 4 ENTRANCE EXAMINATION 2014**

*Kenya Certificate of Secondary Education (K.C.S.E)*

**312/ 1**

**GEOGRAPHY**

**Paper 1**

**OCTOBER/NOVEMBER 2014**

**2 ¾ Hours**

**INSTRUCTION TO CANDIDATES**

This paper consists of **two** sections **A** & **B.**

Answer **ALL** questions in section **A**. In section **B** Answer **QUESTION 6** and **ANY OTHER TWO** questions.

Do not remove pages from this booklet

All answers must be written in the answer sheets provided.

This paper consists of 3 printed pages.

Candidates should check the question paper to ensure that all the pages are printed as indicated and no questions are missing***.***

**Mbooni East Sub – County Form 4 Entrance examination 2014**

**312/ 1**

**Geography**

**Paper 1**

**SECTION A (25 MARKS)**

**Answer the entire question in this section**

1. a). State what is studied in each of the following.
2. Pedology
3. Biogeography (2marks)

 b). Give three reason why geography is studied in schools in Kenya. (3marks)

1. a). Differentiate between local time and standard time.

 b). Give the date in the year when the sun is overhead at noon over the tropic of cancer. (1mark)

 c). State two effects of a solstice on the earth’s surface. (2marks)

1. a). What is weathering. (2marks)

 b). State three ways in which human beings influence weathering of rocks. (3marks)

1. a). Distinguish between platonic and volcanic rocks. (2marks)

 b). State three types of rock metamorphism. (3marks)

1. a). Give two causes of vertical movement of ocean water. (2marks)

 b). Name three types of ocean tides. (3marks)

**SECTION B**

**Answer question 6 and any other two questions from this section**

1. Study the map of Karatina 1:50000 sheet 121/3 provided and answer the questions that follow
2. (i) Give the Six figure grid reference of Ndunduini School east of Mathira technical institute

 (2marks)

 (ii) Calculate the area enclosed by the forest boundary East of easting 97 and West of easting 05 (2marks)

 (iii) What is the length of the all weather bound surface road D451 from Mount Kenya mountain

 lodge to the junction next to Mathira Petrol Station (3marks)

1. (i) Draw a rectangle measuring 12cm by 10cm to represent the area enclosed by the following grid

 references 8545, 8555, 9745 and 9755 (1mark)

 (ii) On the rectangle mark and name the following

- Tumu tumu forest (1mark)

- District boundary (1mark)

- Railway line from Karatina town (1mark)

1. Citing evidence from the map give three economic activities carried out in the area east of the

 district boundary and south of the northing 54 (6marks)

1. Students of Karandi School Carried out a field study on vegetation in the area around their school
2. Give three ways in which they prepared for their study (3marks)
3. State three objectives of their study (3marks)
4. Give two types of vegetation which they identified during their study (2marks)
5. a) (i) Name three volcanic features found in the Rift valley of Kenya (3marks)

 (ii) Name two examples of extrusive igneous rocks (2marks)

1. Describe how the following features are for formed

 (i) A caldera due to subsidence (5marks)

 (ii) A geyser (3marks)

 (iii) A Lava Plateau (4marks)

1. Explain four positive ways in which volcanic mountains influence human activities (8marks)
2. Study the climatic data in the table below and answer the questions that follow.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Month | J | F | M | A | M | J | J | A | S | O | N | D |
| Temp (OC) | 24 | 24 | 24 | 23 | 23 | 22 | 22 | 22 | 23 | 24 | 24 | 23 |
| Rainfall (mm) | 63 | 87 | 159 | 211 | 167 | 88 | 68 | 93 | 78 | 78 | 124 | 97 |

 a (i) On the graph paper provided draw a combined bar and line graph to illustrate temperature and

 rainfall represented in the data above (8marks)

 (ii) Suggest the climatic type illustrated by the graph you have drawn (1mark)

 b (i) Calculate the mean annual rainfall (2marks)

 (ii) What is the annual range of temperature (2marks)

 c (i) State three characteristics of equatorial type of climate (6marks)

 (ii) Explain three characteristics of Savannah type of vegetation (6marks)

1. a (i) What is hydrological cycle (2marks)

 (ii) Using a well labeled diagram describe the processes of hydrological cycle (8marks)

1. Distinguish between:-
2. A river confluence and a river mouth (2marks)
3. A river tributary and a river distributary (2marks)
4. Describe four ways in which waterfalls are formed (8marks)
5. State three conditions which favour the formation of deltas (3marks)
6. a) (i) Define the term Karst Scenery (2marks)

 (ii) Explain three conditions necessary for the development of Karst landscape (6marks)

 b. (i) Describe how stalactites and stalagmites are formed in a Karst landscape (8marks)

 (ii) State three reasons why there are few settlement on a Karst landscape (3marks)

 c. Explain how the following factors influence existence of underground water:-

1. Precipitation (2marks)
2. Nature of the rocks (2marks)
3. Vegetation cover (2marks)