Name: .... Index No ....

School: ....Candidate's Signature: ....

Date: ....

312/1
GEOGRAPHY
Paper 1
JUNE 2014
Time: 2 ¾ Hours

COMA JOINT EXAM 2014

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

GEOGRAPHY
Paper 1
**Time: 2 ¾ Hours**

INSTRUCTIONS TO CANDIDATES:

- *This paper has **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 booklet provided.*

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

SECTION A (25 MARKS)
Answer all the questions in this section .

1. (a) Name **three** types of coral reefs.   (3 mks)

    (b) What are the benefits of coral reefs in the areas they have developed?   (2 mks)

2. (a) The diagram below represents features of intrusive vulcanicity.

    Name the features marked **P,Q** and **R**   (3mks)
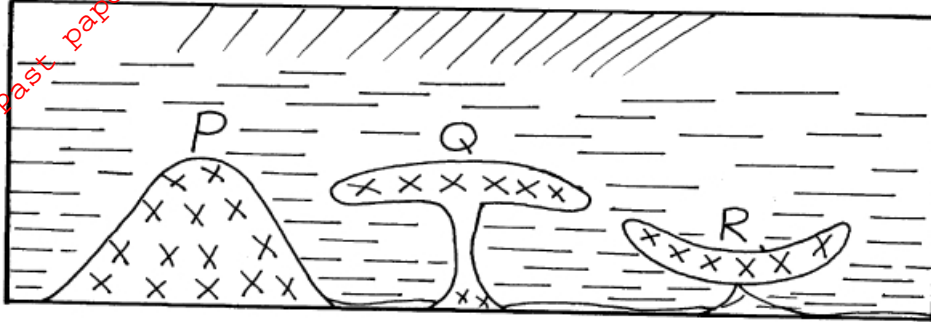
    (b) How is a caldera formed?   (2mks)

3. (a) Name the **three** main layers of the atmosphere from the earth's surface upwards. (3mks)

    (b) What is temperature inversion?   (2mks)

4. (a) Highlight any **three** factors that necessitate the occurrence of an artesian basin.   (3mks)

    (b) Apart from lakes rivers and sea, name any other **two** sources of underground water.   (2mks)

5. (a) Below is a diagram showing the structure of the atmosphere
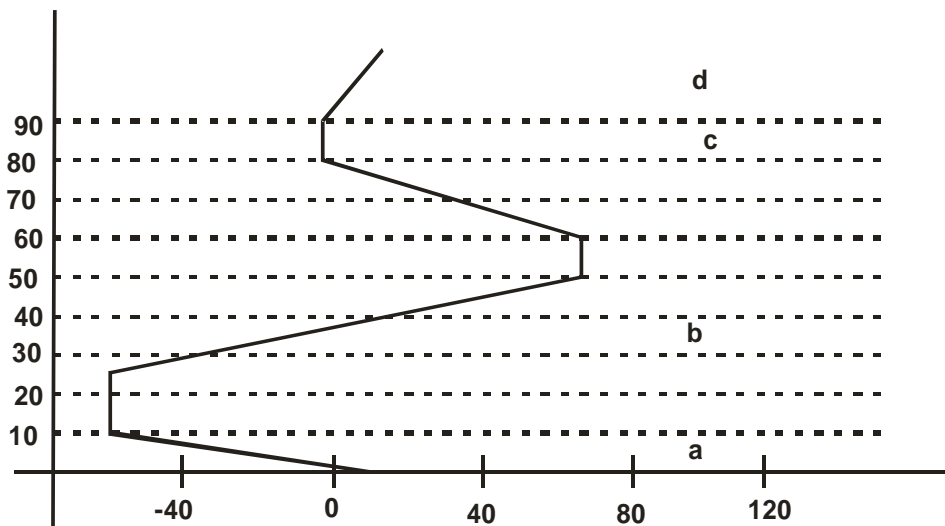
    (a) Name the parts labeled **a**, **b**, and **d**.   (3 mks)

    (b) State the reasons for the behavior of graph at zones **b** and **c**.   (2 mks)

SECTION B (75 MARKS)

Answer question Six and any other two questions from this section.

6. (a) Study the map of Nkubu provided and answer the questions that follow.
      (i) Give the six figure grid reference of the road junction at Nkubu shopping centre.   (1 mk)
      (ii) What is the approximate height of Rurie swamp from the North East of the map?   (1 mk)
      (iii) What is the magnetic declination at the time the map was being drawn?   (1mk)
    (b) (i) Calculate the bearing of the Air photo principal point at Kaguma Grid square 4698 from the
          trigonometrical station (Grid square 5294) North of Thingithu River.   (2 mks)
      (ii) With evidence from the map identify **three** economic activities that the local people of
          Nkubu engage in.   (6 mks)
    (c) (i) Describe the relief of the area covered by the map.   (5 mks)
      (ii) Explain **three** factors influencing settlement in the area covered by the map.   (6mks)
    (d) (i) Name the adjoining map extract to the East of Nkubu.   (1 mk)
      (ii) Calculate the area covered by the forest to the West of the map.   (2 mks)

7. (a) (i) Define wind abrasion.   (2mks)
      (ii) Name **two** processes of wind transportation.   (2 mks)
    (b) Give **one** difference between a rock pedestal and a mushroom block.   (2 mks)
    (c) (i) Explain a factor that makes wind an effective agent of erosion in arid areas.   (2mks)
      (ii) Give **three** characteristics of barchans.   (3mks)
    (d) Using well illustrated diagrams, explain how Mesas and Buttes form.   (8mks)
    (e) You are to carry out a field study in the arid north of Kenya:
       (i) Mention **three** preparations you would make before the study.   (3mks)
       (ii)Mention **three** problems you are likely to face during the field study.   (3mks)

8. (a) (i) Define natural vegetation   (1mk)
       (ii) State **four** characteristics of national vegetation found in tropical rain forests   (4mks)
    (b) Explain **four** ways in which vegetation found in arid areas adapts to environmental conditions of
       the region   (8mks)
    (c) Write the names of the grasslands found in the following areas   (3mks)
       (i) East Africa
       (ii) Canada
       (iii) Argentina
    (d) (i) Give **two** reasons why Tundra region has scanty vegetation   (2mks)
       (ii)State **two** topographical factors that influence vegetation distribution   (2mks)
    (e) State **five** economic importance of vegetation   (5mks)

9.   (a) The diagram below shows a glaciated upland area.
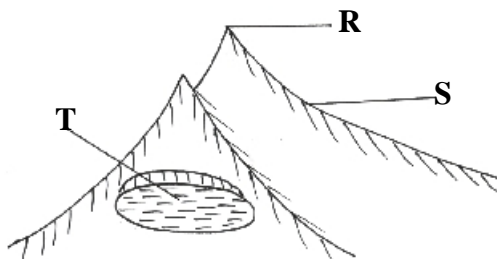
       (i) Name the features marked **R, S** and **T.**   (3mks)
       (ii) Describe the distinctive characteristics of a fiord.   (2mks)
    (b)   With the aid of well labelled diagrams, describe how the following features are formed:-
     (i)   Cirque   (6mks)
     (ii) A hanging valley   (4mks)
    (c)   Explain **two** factors that may lead to glacial erosion in upland areas.   (4mks)
    (d) Suppose you were to carry out a field study on aglaciated upland.
       (i) Name **two** types of moraine you are likely to identify.   (2mks)

(ii) Give **four** reasons why you would need the map of the area. (4mks)

10. The diagram below shows the world distribution of climate types .Use it to answer questions (a)(i)and(ii)
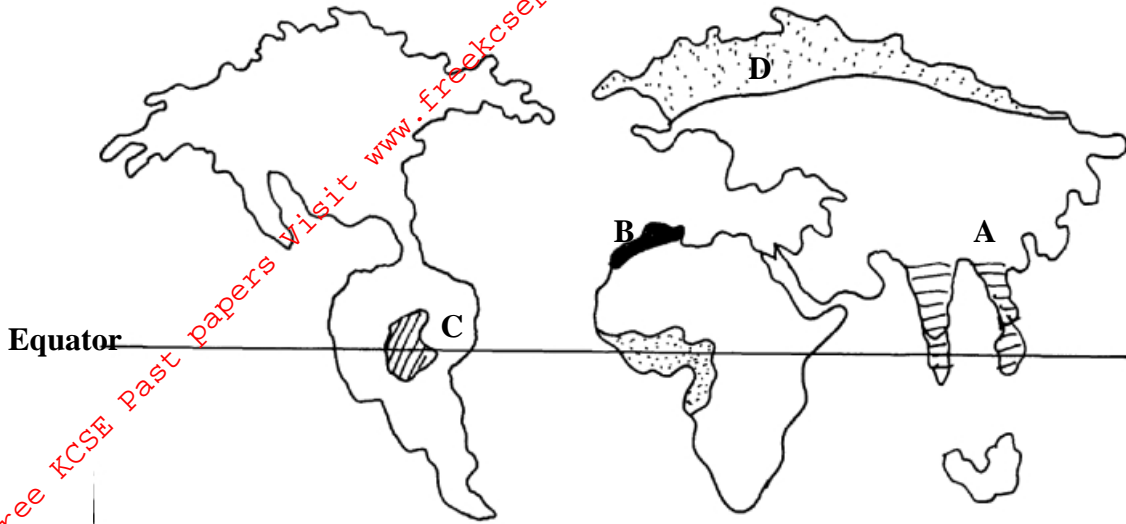
(a) (i) Name the climatic Regions marked **A,B** and **D.** (4mks)
    (ii) State any **four** characteristics of the climate marked **C** (4mks)
(b) (i) Identify any **three** types of cold climates. (3mks)
    (ii) Briefly explain microclimate. (4mks)
(c) (i) What is climate change? (2mks)
    (ii) Study the table below and use it to answer questions (a), (b) and (c)

Station Y

Months	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Temperature (oC)	28	28	27	26	23	21	21	21	23	26	26	27
Rainfall (mm)	277	213	256	107	56	33	31	28	20	132	135	234

(a) Calculate the mean annual temperature for the station. (2mks)
(b) What is the mean annual rainfall. (2mks)
(c) State any **one** characteristics of the type of climate in the station. (2mks)
(d) (i) Explain any **two** causes of global warming. (4mks)
    (ii) Name any **one** greenhouse gases. (1mk)