**NAME: ………………………………………………………CLASS:……………………………**

**INDEX NO: ……………………….....................**

**312/1**

**GEOGRAPHY**

**PAPER 1**

**TIME: 2 ¾ HOURS**

**SET 3**

**FORM 4**

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

**INSTRUCTIONS:**

1. The paper comprises of 2 sections A and B.
2. Attempt **all** question in section A.
3. In section B, answer question 6 and choose any other two questions.
4. Use separate answer sheets for section A and each question in section B.

***This paper consists of 6 printed pages. Candidates should check the question paper to ensure that all pages are printed as indicated and no questions are missing.***

**SECTION A**

**Answer all questions in this section**

**1. (a)** What is the relationship between Geography and Physics. **(2 marks)**

**(b)** Name the **three** main layers of the atmosphere from the earth’s surface upwards. **(3 marks)**

**2. (a)** Name **two** layers of discontinuity that are part of the interior structure of the earth. **(2 marks)**

**(b)** State **three** characteristics of the outer core in the interior structure of the earth. **(3 marks)**

**3. (a)** Distinguish between orogeny and orogenesis. **(2 marks)**

**(b)** Name the countries where the following fold mountains are found. **(3 marks)**

 **i)** A kwapim hills

 **ii)** Deccan Plateau

 **iii)** Cape ranges

**4. a)** State **three** ideal conditions for the formation of an artesian well **(3 marks)**

**b)** Give **two** ways in which underground water may reach the earth surface. **(2 marks)**

**5. (a)** Define a lake. **(2 marks)**

**(b)** State **three** effects of a lake on the climate of the surrounding areas. **(3 marks)**

**SECTION B (75marks)**

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

**6.** Study the map of Karatina (1:50000) sheet 121/3 provided and answer the following questions.

**(a) (i)** Convert the RF of the map into a statement scale. **(1 mark)**

**(ii)** Calculate the bearing of the church at Hiriga grid square 8457 from the cattle dip at Kaburuini

 grid square 8756. **(2 marks)**

**(iii)** Calculate the area of Karatina town. Give your answer in square kilometres. **(2 marks)**

**(iv)** Name the **two** districts covered by the map. **(2 marks)**

**(b)** The rectangle below represent an area on the map extract bounded by easting 85 and 92and northing 45 and 51.



 Identify the features marked A, B, C and D. **(4 marks)**

**(c)** Citing evidence from the map, give three economic activities carried out in the area covered by the

map. **(6 marks)**

**(d)**  Apart from forests, name three types of natural vegetation found to the East of Easting 94. **(3marks)**

**(e)** Describe the drainage of the area covered by the map. **(5 marks)**

**7. a) i)** Name **three** features that form as a result of river erosion. **(3 marks)**

**ii)** Describe the following processes of river transportation.

 Suspension **(2 marks)**

 Traction **(2 marks)**

**(b) i)** Using a well labeled diagram describe how a natural levee forms. **(5 marks)**

 **ii)** Outline **two** factors that may lead to the flooding of a river with natural levees. **(2 marks)**

**iii)** Give **two** ways in which rivers can improve food security in a region. **(2 marks)**

**(c)** Your class is planning to carry out a field study of a river in its youthful stage.

**(i)** Formulate **three**hypotheses for your study. **(3 marks)**

**(ii)** Give **three** reasons why it would be necessary to write a work schedule for the study. \ **(3marks)**

**(iii)** In what ways would you record the data collected from the study. **(3 marks)**

**8. (a)** Name **four** types of faults. **(4 marks)**

**(b)** State **three** causes of faulting. **(3 marks)**

**(c)**  Using well labelled diagrams, describe the formation of Rift valley by compressional forces. **(6 marks)**

**(d)**  Apart from Rift valley, name three features formed through faulting. **(3 marks)**

**(e)** You intend to carry out a field study on faulting at the Rift valley.

(i) Identify **three** sources of data you would use to prepare for the study. **(3 marks)**

**(ii)** State **three** positive effects of faulting to human economic activities you are likely to identify. **(3 marks)**

**(iii)** Outline any **three** problems you are likely to encounter during the field study. **(3 marks)**

**9.** The diagram below shows some surface features in a karst region. Use it to answer question (a)



**a)** Name the features marked P, Q and R. **(3 marks)**

**b)** Outline **three** factors that influence the development of karst scenery. **(3 marks)**

**c)** Using suitable diagrams, describe how the following features which are found in limestone areas are

 formed.

**i)** A swallow hole **(5 marks)**

**ii)** A doline **(3 marks)**

**d)** Explain three ways in which limestone landscapes influence human activities. **(6 marks)**

**e)** Form **four** students of your school undertook field work on a karst landscape.

i) State **two** objectives of their study. **(2 marks)**

ii) Give **one** reason why they need to pre-visit the area. **(1 mark)**

**10. (a)** List

**i)** **Four** characteristics of desert soil. **(4 marks)**

**ii)** **Two** factors that contribute to soil leaching. **(2 marks)**

**b)** Explain how each of the following factors influence the formation of soil.

**i)** Parent rock **(2 marks)**

**ii)** Living organisms **(2 marks)**

**iii)** Topography **(2 marks)**

**c)** Draw a well labelled diagram of a soil profile of a mature soil. **(5 marks)**

**d)** Explain **four** ways in which human activities contribute to soil erosion. **(8 marks)**