

NAME Index No.

Date:

Candidate's Signature:

3121/1

GEOGRAPHY

PAPER 1

JUNE 2016

TIME: $2\frac{3}{4}$ hours

THE 4MCK JOINT EXAMINATION

GEOGRAPHY

PAPER 1

JUNE 2016

TIME: $2\frac{3}{4}$ hours

Instructions to Candidates

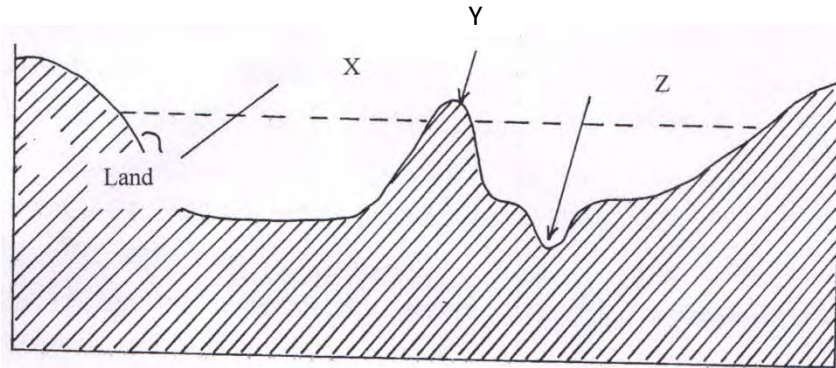
Answer all the questions in section A.

In section B, answer question 6 and any other two questions.

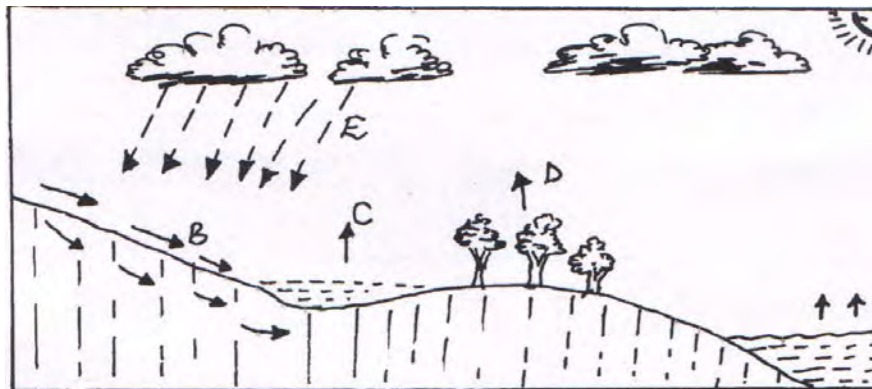
SECTION A

Answer all the questions

- Explain the relationship between Geography and geology (2 marks)
 - State TWO reasons as to why the shape of the earth is spherical. (2 marks)
- a) The diagram below illustrates the relief of an ocean floor. Use it to answer the questions that follow



- Name the features marked x, y, and z (3 marks)
- State THREE reasons why ocean waters are saline. (3 marks)
- What is a rock? (1 mark)
 - Distinguish between hypabyssal and plutonic rocks (2 marks)
 - State any TWO economic importance of rocks to man (2 marks)
 - What is the effect of the international data line on time. (2 marks)
 - If the local time in Mombasa at longitude 45°E is 12:00 noon, what will the time be at Abidjan in Ivory Coast at longitude 10°W ? (2 marks)
 - The diagram below shows a hydrological cycle. Study it and answer questions 5a) and b)



- a) Name the process marked B,C and D (3 marks)
- b) State any three factors which influence the rate of process marked B. (3 marks)

SECTION B

ANSWER QUESTION 6 AND ANY OTHER TWO.

6. Study the map of Busia 1:50,000 (sheet 101/1) provided and answer the following question.
- a) (i) What type of map is Busia sheet? (1 mark)
- (ii) What is the approximate height of Nangingini hill at grid square 2736. (2 marks)
- (iii) Give two methods that have been used to represent relief in the area covered by the map. (2 marks)
- (iv) What is the magnetic declination of the map? (2 marks)
- b) (i) Draw a cross section along Northing 33 from Easting 26 up to Easting 32. Use 1 cm represents 50M. (6 marks)
- (ii) On the cross section, mark and name the following features
- Odiado hill (1 mark)
 - Regional boundary (1 mark)
 - Road C 526 (1 mark)
 - A river (1 mark)
- (iii) Describe the drainage of the area covered by the map. (6 marks)
- c) Calculate the area covered by the thicket vegetation around grid square 3534 (1 mark)
- d) Explain how drainage has influenced the distribution of settlements in the area covered by the map. (2 marks)
7. (a) What is a lake. (2 marks)
- (b) (i) Name two types of lakes formed due to volcanicity. (2 marks)
- (ii) Explain how lake Victoria influences the climate of the surrounding area. (6 marks)

- c) (i) State three main reasons why lakes within the Rift Valley are salty. (3 marks)
(ii) Name any three fresh water lakes in Kenya which are within the rift Valley. (3 marks)
- d) (i) Explain any four economic significance of lakes to human activities. (8 marks)
ii) Give one negative effects of lakes to man. (1 mark)
8. (a) (i) Differentiate between weathering and mass wasting. (2 marks)
(ii) State three main agents of weathering. (3 marks)
- b) Explain three effects of soil creep on the earth surface. (6 marks)
- c) Describe the following chemical weathering processes
- i) Hydration (3 marks)
 - ii) Oxidation (3 marks)
 - iii) Carbonation (3 marks)
- d) Students from Mbitini Girls Secondary school carried field study on weathering around their school.
- i) Give three reasons why they carried out a reconnaissance survey. (3 marks)
 - ii) State two methods they used to record the data collected during field study. (2 marks)
9. a) List;
- i) Four characteristics of desert soils. (4 marks)
 - ii) Two factors that contribute to soil leaching. (2 marks)
- b) Explain how each of the following factors influence the information of soil
- i) Parent rock (2 marks)
 - ii) Living organisms (2 marks)
 - iii) Topography (2 marks)
- c) Draw a well labeled profile of a mature soil. (5 marks)
- d) Differentiate between a soil profile and catena. (2 marks)

e) Explain three ways in which human activities contribute to soil erosion. (6 marks)

10. a) (i) **Name** conditions necessary for wind deposition to take place in hot deserts.

(3 marks)

(ii) **State three** mechanisms of wind transportation in hot deserts. (3 marks)

b) With the aid of a labeled diagram **describe how** the following features are formed.

i) Rock pedestal (6 marks)

ii) Zeugen (6 marks)

c) You are supposed to carry out a field study of a semi-arid area in Kenya:

(i) **Name two** districts which you would visit for your study. (2 marks)

(ii) What information would you collect through observation that would indicate that the area is turning into a desert? (2 marks)

d) **State three** measures you would recommend to combat desertification in the area. (3 marks)