



Scott Christian  
UNIVERSITY

**SCHOOL OF EDUCATION**

**SEPTEMBER-DECEMBER 2022 SEMESTER EXAMS.**

**COURSE CODE: GEOG 410**

**COURSE TITLE: ARID AND SEMI ARID LANDS**

**Time:2HRS**

**Nov/Dec, 2022**

**INSTRUCTIONS**

**Answer section A and any other two questions from section B**

**SECTION A (30marks)**

1. a) Differentiate arid land from semi-arid land. (2mks)
- b) With reference to ASALs briefly explain what is:
  - i. Water budget. (3mks)
  - ii. Marginal land. (3mks)
- c) State and explain three human related causes of climate change. (6mks)
- d) Explain how climate change can be curbed in Kenya. (5mks)
- f) Discuss the role of wildlife as an alternative land use in arid and semi-arid lands. (10mks)

**SECTION B(30 marks)**

- 1 e) Assess the concept of multiple land use with reference to rangelands (3mks)
- b) Describe the challenges facing environmental development of ASALs lands in Africa. (6mks)
- c) Outline the need to conserve rangeland vegetation. (6mks)

- 2 a) What is biodiversity? (3mks)  
b) Discuss the causes of loss of biodiversity in arid and semi-arid lands in Africa(10mks)
- 3 a) Explain the role of pastoralism in sustainable use of rangeland resources. (7mks)  
b) Discuss four adaptive strategies applied by pastoral communities in use of rangelands (8mks)
- 4 a) State how vegetation in arid zones adapts to the low rainfall conditions. (3mks)  
b) Identify four negative effects of Aridity encroachment. (4mks)  
d)Discuss measures taken by pastoralists in Turkana to curb the problem caused by Aridity and desertification in their local region. (8mks)



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**EXAM-SEPTEMBER-DECEMBER 2022 SEMESTER.**

**COURSE CODE: GEOG 411**

**COURSE TITLE: GEOMORPHOLOGY**

**Instructor: Dr MULI GM**

**Time: 2HRS**

**Nov/Dec , 2022**

**INSTRUCTIONS:**

**Answer section A and any other two questions from section B**

**SECTION A (30marks)**

- 1.(a) Name three types of coral reefs. (3 marks)
  - (b) What are the benefits of coral reefs in the areas they have developed? (2 marks)
- 2.(a)(i) State the theory of isostasy(2mks)
  - ii) State the plate tectonic theory. (2 marks)
    - (ii) State one feature formed when:
      - (i)Tectonic plates move towards each other. (1 mark)
      - (ii)The plates move away from each other at the boundary. (1 mark)
  - (b) State three effects of faulting on drainage of an area. (3 marks)
3. (a) Identify two scales used to measure the intensity of an earthquake. (2 marks)
  - (b) Give three major earthquake zones of the world. (3 marks)
4. (a) State two ways in which plants cause weathering. (2 marks)
- 5 (a) What is a river divide? (2mks)

(b) Give three processes by which a river transports its load (3mks)

Q6(a) Give three types of desert surfaces. (3mks)

(b) Mention two processes through which wind erodes desert surfaces. (2mks)

7. With reference to continental drift theory state the evidences of that support the theory (4mks)

## **SECTION B (30marks)**

### **Answer any two questions**

1 a) Identify two processes in which ice erodes (2mks)

ii.) Name three types of glacial moraine (3mks)

b.) Give three ways in which ice moves (3mks)

c.) i) Apart from Aretes, identify three other ice erosional features in highland areas (3mks)

d.) Explain the significance of upland glaciated features to human activities (4mks)

2 (a) (i). Differentiate between weathering and mass wasting (2mks)

(ii). Identify three agents of weathering (3mks)

(b). Describe how Carbonation processes of weathering occurs (3mks)

(c). Explain the significance of weathering to human activities (7mks)

3.(a) (i) What is a desert? (2 marks)

(ii) Name two types of deserts landscapes. (2 marks)

b) Describe how wind transport materials on the desert surface using the following processes. (i) Surface creep. (2 marks)

(ii) Saltation. (2 marks)

(c) Using well labelled diagram(s) explain how Barchan is formed. (7 marks)

4 .(a)(i) What is an orogeny? (1 marks)

(ii) Give two factors that influence the folding process of rocks. (2 marks)

(b) Describe how an overthrust fold is formed. (3 marks)

(c) Name the countries in which the following fold mountains are found.

(i) Atlas ( $\frac{1}{2}$  mark)

(ii) Alps ( $\frac{1}{2}$  mark)

(iii)Himalayas ( $\frac{1}{2}$  mark)

(iv)Andes ( $\frac{1}{2}$  mark)

(d)(i)Apart from fold mountains, name three other features resulting from folding.

(3 marks)

(ii) Explain four ways in which fold mountains influence climate. (4 marks)



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**SEPTEMBER-DECEMBER 2022 SEMESTER EXAMS.**

**COURSE CODE: GEOG 310**

**COURSE TITLE: HYDROMETEOROLOGY, CLIMATOLOGY AND  
METEOROLOGY**

**Instructor: Dr MULI. G.M**

**Time: 2HRS**

**Nov/Dec, 2022**

**INSTRUCTIONS:**

**Answer section A and any other two questions from section B**

**SECTION A (30marks)**

- 1 a) Differentiate micro climate from macro climate (2mks)
  - b) Give four characteristics of Katabatic winds (4mks)
- ii) Differentiate percolation from infiltration (2mks)
  - c) Define the following terms (6mks)
    - i) Temperature inversion
    - ii) Normal lapse rate
    - iii) Actual lapse rate
  - d) Explain the formation of frontal rainfall along the Kenyan coast (6 mks)
  - e) Discuss the influence of ITCZ on rainfall patterns in East Africa (5 mks)
  - f) Describe the characteristics of the Ozone layer(5mks)

**SECTION B 30 marks-**

**Answer any two questions only from this section**

Q 1 a) Define the term climatic controls 3mks

b) Discuss four climatic controls that influence climatic zones distribution in Africa (12mks)

Q2 a) What is global warming (2mks)

b) Discuss the consequences of global warming (8 mks)

c) Analyze five solutions to climate change (5mks)

Q3 a) Define the term extreme weather event(3mks)

b) Discuss the impacts of extreme weather conditions in Europe due to climatic change (12mks)

Q4 a) state 3 main systems used in climatic classification (5mks)

b) Describe the characteristics of the polar climatic zone (10 mks)