



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND  
TECHNOLOGY**

**SCHOOL OF AGRICULTURAL AND FOOD SCIENCES**

**FIRST YEAR SECOND SEMESTER UNIVERSITY EXAMINATION  
FOR THE DEGREE OF BACHELOR OF SCIENCE IN ANIMAL  
SCIENCE**

**2024/2025 ACADEMIC YEAR**

**SIAYA**

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**COURSE COD: AAB 1104**

**COURSE TITLE: Ecology And Climate Change**

**EXAM VENUE:**

**TIME**

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**Instructions:**

- 1. Answer ALL questions in section A and ANY other 2 Questions in section B.**
- 2. Candidates are advised not to write on question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**

## SECTION A: 30 MARKS

### Question 1

- a) What is the relevance of allelopathy in ecosystem function? (3 marks)
- b) Explain the significance of denitrification in agriculture and sewage treatments. (3 marks)
- c) Define population density and distribution, giving one advantage of each. (3 marks)
- d) Explain the influence of relative humidity on distribution of organisms in an ecosystem. (3 marks)
- e) What is biomagnification? Give examples to support your answer. (2 marks)
- f) Differentiate the following terms: biome, ecosystem and community. (3 marks)
- g) Outline the ecological significance of eutrophication. (3marks)
- h) Differentiate between the following terms;
  - (i) Food web and food chain (2 marks)
  - (ii) Ecosphere and landscape (2 Marks)
- i) Argue the effect of light on plant species adaptation and distribution in terrestrial ecosystems. (3 marks)
- j) Relate the application of the two laws of thermodynamics to ecosystem function. (3 marks)

## SECTION B: 40 MARKS

### Question 2

Discuss ex-situ conservation and its associated shortcomings. (20 marks)

### Question 4

- (a) Citing any three relevant examples explain the concept of mutualism. (10 marks)
- (b) As an ecology student, discuss the criteria you can use to determine what to include in your conservation program. (10 marks)

### Question

Discuss ecological succession highlighting the different types. (20 marks)