

CHUKA



UNIVERSITY

## UNIVERSITY EXAMINATIONS

### EXAMINATION FOR THE AWARD OF DIPLOMA IN WILDLIFE MANAGEMENT

#### DWLM 0121: INTRODUCTION TO ECOLOGY

STREAMS: DWLM Y1S1

TIME: 2 HOURS

DAY/DATE: MONDAY 16/12/2024

8.30 A.M – 10.30 A.M.

---

#### INSTRUCTIONS:

- Answer **ALL** questions in Section A and **any other TWO** in Section B.
- Do not write anything on the question paper.

#### SECTION A (30 MARKS)

1. Define the following terms as used in ecology
  - a) Food web (2 Marks)
  - b) Community (2 Marks)
  - c) Ecosystem (2 Marks)
2. a) Name THREE scales of ecosystem (3 Marks)  
b) Outline any THREE functions of ecosystem (3 Marks)
3. Explain the concept of autotrophic nutrition and its significance in ecosystems. (6 Marks)
4. Using an illustration, explain the reason why energy pyramids are always larger at the bottom than at the top (6 Marks)
5. a) Name THREE abiotic factors in the environment (3 Marks)  
b) State THREE instruments used to measure any of the abiotic factors within the environment (3 Marks)

#### SECTION B (40 MARKS)

6. a) Discuss sampling as used in ecological studies (10 Marks)  
b) Using example and illustration, discuss the use of quadrat in an ecological study (10 Marks)

7. Using examples, discuss the following in the trophic structures
- a) Primary producers (5 Marks)
  - b) Secondary consumers (5 Marks)
  - c) Tertiary consumers (5 Marks)
  - d) Decomposers (5 Marks)
8. Use examples to discuss the following
- a) The niche concept (5 Marks)
  - b) Resource partitioning (5 Marks)
  - c) Competitive exclusion principle (5 Marks)
  - d) The ecotone (5 Marks)
-