

CHUKA



UNIVERSITY

**UNIVERSITY EXAMINATIONS**

**EXAMINATION FOR THE AWARD OF DEGREE  
OF BACHELOR OF SCIENCE IN WILDLIFE ENTERPRISES AND  
MANAGEMENT**

**WIEM 424: ADVANCED ECOLOGY**

**STREAMS: BSc (WIEM) Y4S2**

**TIME: 2 HOURS**

**DAY/DATE: TUESDAY 21/09/2021**

**8.30 A.M. – 10.30 A.M.**

**INSTRUCTIONS:**

- Answer all questions in section A and any two in section B
- Do not write on the question paper

**SECTION A: (30 MARKS)**

1. Write short notes on the following terms as used in ecology
  - a) Population viability (2 marks)
  - b) Biological legacies (2 marks)
2. Using a simple diagram, describe the levels of biological organization. (6 marks)
3. Briefly explain life history trade-offs in birds. (4 marks)
4. Describe the different types of symbiotic relationships seen in organisms. (6 marks)
5. Discuss how dispersal mechanisms result in species distribution. (4 marks)
6. Briefly explain the two types of competition and their effects on species. (6 marks)

**SECTION B: (40 MARKS)**

7. Using appropriate illustrations, discuss the influence of predator-prey relationships on community dynamics. (20 marks)
8. Discuss the various ecological concepts and principles used in conservation and management. (20 marks)

9. a) Discuss the application of remote sensing technology in phenology. (10 marks)
- b) Explain species abundance in relation to environmental gradients. (10 marks)
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