

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

SECOND YEAR EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF
SCIENCE IN WILDLIFE AND ENTERPRISE MANAGEMENT

WIEM 221: PLANT ECOLOGY

STREAMS: BSC (WIEM) Y2S2

TIME: 2 HOURS

DAY/DATE: TUESDAY 11/04/2023

11.30 A.M. – 1.30 P.M.

INSTRUCTIONS:

- Answer ALL questions in section A and any TWO in section B
- Do not write anything on the question paper

SECTION A (30 MARKS)

1. Briefly explain the following concepts:
 - (a) Community ecology [1 mark]
 - (b) Habitat heterogeneity [1 mark]
 - (c) Photoperiodism [1 mark]
 - (d) Niche [1 mark]
2. Outline the methods you would use to study vegetation in a grassland, forest, arid and woodland ecosystems [4 marks]
3. Describe the three main patterns of plant distribution within protected areas [6 marks]
4. Outline five mechanisms employed by plants to defend themselves against herbivory [5 marks]
5. Briefly explain three soil chemical properties influencing vegetation composition and productivity. [6 marks]

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6. Enumerate five factors which influence the allelopathic effect of plants [5 marks]

SECTION B (40 MARKS)

7. (a) Using relevant examples, discuss various types of interactions between plants and animals within a protected area. [12 marks]
- (b) Discuss the environmental factors which tend to affect plant growth and development. [8 marks]
8. Discuss the abiotic and biotic factors influencing the spatial distribution of plants within protected areas. [20 marks]
9. (a) Discuss the characteristics of a flower influencing the different types of cross pollination observed in plants. [8 marks]
- (b) Using specific examples, explain the different types of photosynthesis exhibited by plants under different environmental conditions. [12 marks]
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