

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

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

WIEM 221: PLANT ECOLOGY

STREAMS: BSC WIEM Y2S2

TIME: 2 HOURS

DAY/DATE: THURSDAY 08/07/2021

8.30 A.M – 10.30 A.M

INSTRUCTIONS:

Answer all questions in section A and any other two in section B

SECTION A: 30 MARKS

1. Explain the concept of allelopathy and its role in plant competition. [5 marks]
2. Briefly describe four types of vegetative reproduction found in plants and provide an example of each. [4 marks]
3. Describe three ways that herbivory can affect plant productivity. [6 marks]
4. Explain briefly four different plant defensive responses to grazers. [4 marks]
5. Explain the difference between soil horizon A and horizon B and describe how plants use these two layers. [6 marks]
6. Briefly describe the leaf adaptations making it possible for a plant to reduce transpirational water loss during dry periods. [5 marks]

SECTION B (40 MARKS)

7. (a) How does CAM photosynthesis differ from C_3 photosynthesis, and under what environmental conditions is each of these advantageous. [8 marks]
(b) Discuss the factors that influence distribution of plants in an ecosystem. [12 marks]

8. Discuss a method you would use to estimate plant biomass in a forest, grassland, desert and a woodland. [20 marks]
 9. Discuss the ways in which man tends to influence plant productivity within the natural environment. [20 marks]
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