

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN

BOTA 361: PLANT ECOLOGY

STREAMS:

TIME: 2 HOURS

DAY/DATE: FRIDAY 12/04/2019

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. Define the following terms:
 - (i) Ecosystem [1 mark]
 - (ii) Synecology [1 mark]
 - (iii) Ecological efficiency [1 mark]
 - (iv) Community ecology [1 mark]
2. (a) Differentiate between scramble and exploitative competition. [2 marks]
(b) Explain the possible effects of interspecific competition. [4 marks]
3. Classify macrophytes based on habitat and location in a pond. [5 marks]
4. Using a diagram, describe the logistic population growth curve. [5 marks]
5. Discuss the various life forms based on the position of perennating bud. [5 marks]
6. Define a species ecological niche. [5 marks]

SECTION B (40 MARKS)

7. Discuss plant adaptation in the following vegetation types:
 - (a) Tropical rain forest. [10 marks]
 - (b) Savannah [10 marks]
8. With the help of a diagram, illustrate how nature recycles nitrogen. [20 marks]

9. (a) Discuss the trends of change from a young to mature plant community. [10 marks]
- (b) Discuss the parameters for describing a community structure. [10 marks]
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