

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

RESIT/SPECIAL EXAMINATION

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE
IN BOTANY

BOTA 361: PLANT ECOLOGY

STREAMS: BSC BOTA

TIME: 2 HOURS

DAY/DATE: MONDAY 01/02/2021

11.30 A.M – 1.30 P.M.

INSTRUCTIONS:

- *Answer ALL questions in section A and any other TWO in section B*

Section A (30 marks)

1. Define the following terms:
 - a. Biodiversity (1 mark)
 - b. Autecology (1 mark)
 - c. Ecological succession (1 mark)
 - d. Palaeoecology (1 mark)
 - e. Community structure (1 mark)
2. Classify plants based on position of perenating buds (5 marks)
3. Explain why food chains rarely exceed 5 trophic levels and the ecological significance of this limitation (5 marks)
4. Elaborate using a diagram how energy flows through an ecosystem (5 marks)
5. Explain how competition brings about evolution (5 marks)
6. Outline the various adaptation of tropical rain forest vegetation (5 marks)

Section B (40 marks)

7. Discuss how the following factors affect plant growth and development
 - a. Water (10 marks)
 - b. Temperature (10 marks)

8. Discuss biotic interrelationships in plants giving examples in each case (20 marks)
9. a. Differentiate between r and K- strategies (10 marks)
- b. Discuss the different types of population growth curves (10 marks)
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