



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY

SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCES
IN BIOLOGICAL SCIENCES**

3th YEAR FIRST SEMESTER 2016/2017 ACADEMIC YEAR

MAIN CAMPUS - REGULAR

COURSE CODE: SBI 3312
COURSE TITLE: PRINCIPLES OF ECOLOGY II
EXAM VENUE: STREAM: (BSC. BIO)
DATE: EXAM SESSION:
TIME: 2 HOURS

Instructions:

- 1. Answer ALL questions in Section A and Any two questions in Section B**
 - 2. Candidates are advised not to write on question paper**
 - 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**
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SECTION A: (30 MARKS) ANSWER ALL QUESTIONS

1. Define the following ecological terms (3 marks)
 - a) Synecology
 - b) Biocoenosis
 - c) Commensalism
2. List three factors that shape community structure. (3 marks)
3. Natural communities consist of plants and animals, list six key ways in which they relate. (3 marks)
4. Discuss three forms of herbivory encountered in natural communities (3 marks).
5. State 3 key responses of plant to herbivory. (3 marks).
6. Using an example, explain the role of pollination as a co-evolutionary process between plants and insects (3 marks)
7. Distinguish between objective and subjective sampling of ecological communities. (3 marks)
8. Explain two main characteristics of a plant community stand. (3 Marks)
9. What are wetlands? State two current ecological challenges to E. African wetlands. (3 marks)
10. Explain the sigmoid population growth curve using an illustration. (3 marks)

SECTION B: ESSAY QUESTIONS (40 MARKS).

11. Discuss the origin and the evolution of the Community Concept (20 marks)
12. Discuss the grassland biome. (20 marks)
13. Discuss key ecosystem services derived from wetlands. (20 marks)
14. Discuss threats to natural ecosystems as a result of human population growth. (20 marks)