



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY
SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF EDUCATION
SCIENCES WITH IT.

2nd YEAR 2nd SEMESTER 2018/2019 ACADEMIC YEAR

MAIN CAMPUS - REGULAR

COURSE CODE: SBT 205
COURSE TITLE: PLANT ECOLOGY AND ENVIRONMENTAL SCIENCE
EXAM VENUE: LAB 5 **STREAM:** (BEd Science)
DATE: 24/04/2019 **EXAM SESSION:** 12.00-2.00PM
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: SHORT ANSWER QUESTIONS (30 MARKS)

1. Explain why species richness generally declines along an equatorial-polar gradient. (3 marks).
2. Explain the relevance of monitoring the size and structure of populations (3 marks)
3. Differentiate three types of competitive interactions exhibited by organisms(3 marks).
4. Explain the concept of species fidelity and dominance in plant communities. (3 marks).
5. Citing relevant examples, explain the concepts of niche partitioning and niche overlap (3 marks)
6. Describe vegetation stratification in any aquatic ecosystem (3 marks).
7. Explain Raunkiaer's (1903) classification of life forms in nature (3 marks)
8. Describe afro-alpine vegetation structure on Mt Elgon in Kenya. (3 marks).
9. State the importance of understanding floristic composition in plant communities. (3 marks).
10. Explain the importance of salt marsh ecosystems in Kenya (3 marks).

SECTION B: ESSAY QUESTIONS (40 MARKS)

11. Discuss renewable and non-renewable resources in Kenya. (20 marks).
12. Write an essay on the structure and characteristics of primary and secondary forest.
13. Citing relevant examples, discuss human impacts on aquatic and terrestrial biodiversity. (20 marks)
14. Discuss relevant approaches for conserving and managing ecosystems in East Africa. (20 marks)