



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY

SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES

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

4th YEAR 2nd SEMESTER 2018/2019 ACADEMIC YEAR

MAIN CAMPUS - REGULAR

COURSE CODE: SBI 3445
COURSE TITLE: APPLIED ECOLOGY
EXAM VENUE: BIO LAB STREAM: (BIO)
DATE: 29/04/2019 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 (40 MARKS)

1. Briefly describe the spatial distributions patterns of members of populations. (3 Marks).
2. State three major factors that influence the biotic potential of populations. (3 Marks)
3. Describe any two outcomes of competitive interactions. (3 Marks)
4. Distinguish between exponential and logistic population growth. (4 Marks)
5. Briefly describe any two methods of determining species diversity in communities. (4 Marks)
6. Briefly tabulate community interactions. (3 Marks)
7. Briefly describe any three types of climax communities. (3 Marks)
8. Briefly describe survivorship curves. (3 Marks)
9. Distinguish between demographic and environmental stochasticity. (2 Marks)
10. Briefly describe life history strategies in animals. (2 Marks)

SECTION B: ESSAY QUESTIONS (40 MARKS)

11. a). Describe succession in ecology. (5 Marks)
b). Discuss successional processes in communities and ecosystems. (15 Marks)
12. Discuss ways in which the age structure influences population growth. (20Marks).
13. Discuss the relationships between disturbance and diversity in communities. (20 Marks)
14. Discuss population cycles (20 Marks)