JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY

SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES

UNIVERSITY SPECIAL EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN BIOLOGICAL SCIENCES

FOUTH YEAR 2019/2020 ACADEMIC YEAR

MAIN CAMPUS - REGULAR

COURSE CODE:	**SBI 3442**
COURSE TITLE:	**APPLIED ECOLOGY**
EXAM VENUE:	**STREAM: (BSC)**
DATE:	**EXAM SESSION:**
TIME: 2 HOURS	

Instructions:

1. **Answer ALL questions in Section A and Any two selected 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**

SECTION A: Short Answer Questions (30 marks)

1. Describe any four factors that limit maximum fecundity. (3 marks)

2. With the help of diagrams, describe types of survivorship curves. (3 marks)

3. Describe the exponential growth curve. (3 marks)

4. Illustrate tolerance limits. (3 marks)

5. Describe causes of any three spatial scales in ecology. (3 marks)

6. State any three ways of describing community structure. (3 marks)

7. Describe the application of intermediate disturbance hypothesis. (3 marks)

8. Describe any three types of climax communities. (3 marks)

9. Describe three methods that can be used to calculate the ecological lifetable. (3 marks)

10. Describe any three changes that occur during ecosystem succession. (3 marks)

SECTION B: Essay Questions (40 marks)

11. Discuss the role of competition in population regulation. (20 marks)

12. Discuss community interactions. (20 marks)

13. Age structure is a clear indicator of the direction of population growth. Discuss.

(20 marks)

14. Discuss the relationships between successional processes and diversity in communities.

(20 marks)