JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY

SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES

UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF BACHELOR EDUCATION SCIENCE WITH IT

SECOND YEAR FIRST SEMESTER 2018/2019 ACADEMIC YEAR

MAIN CAMPUS - REGULAR

COURSE CODE: **SZL 202**

COURSE TITLE: **BASIC ECOLOGY**

EXAM VENUE: **STREAM: (BSC)**

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**

SECTIONA: SHORT ANSWER QUESTIONS (30 MARKS)

1. Define the following terms: (3 marks)
    i) Biosphere
    ii) Population
    iii) Ecosystem
2. Explain why food chains are relatively limited between three to five trophic levels 3mks
3. Differentiate between autecology and synecology. (3 marks)

4. List three types of ecological pyramids. (3 marks)
5. State categories of abiotic factors influencing species diversity. (3 marks)
6. Differentiate between Carnivory and Herbivory . (3 marks)
7. List factors that affect population growth in a habitat. (3 marks)
8. Outline characteristics that distinguish r-strategists and k-strategists species (3 marks)
9. Discuss flow of energy in a terrestrial ecosystem. (3 marks)
10. Briefly explain approaches for conserving ecosystems in nature. (3 marks)

SECTION B: ESSAY QUESTIONS (40 Marks)
11. Discuss adaptations of organisms found in a grassland ecosystem. (20 marks)
12. Describe carbon cycle in a named habitat under the following subheadings: the process; importance of the cycle; how human activities affect the cycle. (20 marks)

13. With relevant examples give an outline how human factors that affect biodiversity at genetic, specific and ecosystem levels in natural environments. (20 marks)

14. Discuss biotic factors that affect distribution and abundance of organisms in ecosystems.

(20 marks)