

**MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY**

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**University Examinations 2016/2017**

FIRST YEAR, FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN BIOLOGICAL SCIENCES, BACHELOR OF EDUCATION SCIENCE.

**SZL 3100: ECOLOGY BIOANALYSIS**

**DATE: DECEMBER, 2016 TIME: 2 HOURS**

**INSTRUCTIONS: -** *Answer question* ***one*** *and any other* ***two*** *questions*

**QUESTION ONE (30 MARKS)**

1. Distinguish between the following
2. Synecology and Autecology (2 marks)
3. Realised Niche and Foundamental niche (2 marks)
4. K-strategist and r-strategist (2 marks)
5. Illustrate the three different survivorship curves and explain each of them.(6 marks)
6. Outline the characteristics of a theoretical population (at least six) (6 marks)
7. Explain the role of mimicry as a defence against predation. (4 marks)
8. Illustrate the three main (named) population distribution patterns. (3 marks)
9. Explain any five factors that determine species diversity. (5 marks)

**QUESTION TWO (20 MARKS)**

Discuss different symbiotic associations between different organisms (20 marks)

**QUESTION THREE (20 MARKS)**

Discuss competition as an interaction between and among species. (20 marks)

**QUESTION FOUR (20 MARKS)**

Discuss the options available for estimation of productivity in different ecosystems. (20 marks)

**QUESTION FIVE (20 MARKS)**

Discuss the concept of succession in ecosystem. (20 marks)