



MASENO UNIVERSITY

UNIVERSITY EXAMINATIONS 2013/2014

**SECOND YEAR FIRST SEMESTER EXAMINATIONS FOR THE
DEGREE OF BACHELOR OF SCIENCE IN ENVIRONMENTAL
SCIENCE WITH INFORMATION TECHNOLOGY**

(MAIN CAMPUS)

NES 202: ELEMENTS OF ECOLOGY

Date: 19th November, 2013

Time: 2.30 - 4.30 p.m.

INSTRUCTIONS:

- **Answer Question ONE and any other TWO questions.**

1. a. Define the following ecological terms:
 - i). Keystone species [2 marks]
 - ii). Matrix [2 marks]
 - iii). Ecosystem [2 marks]
 - iv). Ecological niche [2 marks]
 - v). Corridor [2 marks]
 - b). Describe the flow of energy and matter in the ecosystem. [8 marks]
 - c). Explain SIX characteristics of agroecosystems. [12 marks]
 2. Discuss the factors that affect the diversity of species in ecosystems. [20 marks]
 3. a). Describe the most common features of intraspecific competition. [12 marks]
 - b). Explain FOUR characteristics of plant communities. [8 marks]
 4. a). With the aid of a diagram, explain the nitrogen cycle. [12 marks]
 - b). Explain FOUR factors that control the rate of nutrient cycling in the ecosystem. [8 marks]
 5. Describe the process of ecological succession. [20 marks]
 6. a). With illustrations, explain the basic patterns of population growth forms. [10 marks]
 - b). Differentiate between crude density and ecological density. [10 marks]
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