JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF AGRICULTURAL AND FOOD SCIENCES

FIRST YEAR SECOND SEMESTER UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN HORTICULTURE
2017/2018 ACADEMIC YEAR

REGULAR

COURSE CODE: AHT 3213

COURSE TITLE: FUNDAMENTALS OF PLANT ECOLOGY

EXAM VENUE: LR 2 **STREAMS: BSc. Horticulture**

DATE:19/12/17 **EXAM SESSION:9.00 – 11.00 AM**

TIME: 2 HOURS

Instructions:

1. **Answer ALL questions in section A and ANY other 2 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.**

Section A: 30 marks
Instructions: Answer all questions

1. Explain why interactions among members of the same species are antagonistic 2 marks
2. Topography is an important abiotic feature that has profound influence on adaptation of biosystems in the ecosystem. Describe the mechanisms by which this is achieved. 5 marks
3. Highlight any one cause of succession and differentiate between primary and secondary succession 4 marks
4. Discuss the concept of nitrification highlighting its economic importance in ecosystesms 5 marks
5. Describe the term bio-magnification highlighting relevant examples 4 marks
6. Differentiate the following terms; biome, ecosystem and community 3 marks
7. Explain the term ecology as described by Krebs (1972) 3 marks
8. Describe population density and distribution giving one advantage of each 4 marks

Section B: 40 Marks
Instructions: Answer any two Questions

9.
    a. Using a well labeled diagram Describe the term "biosystems" 5 Marks
    b. Describe the significance of mutualism in an ecosystem, highlighting any three important examples. 5 marks.
    c. Describe any three application of allelopathy in management of agricultural ecosystems 5 marks
    d. Discuss any four characteristics you would use to describe a community as an Ecology student. 10 marks
10. Discuss ex-situ conservation highlighting its major shortcomings 20 marks
11. Discuss the competitive exclusion principle using well labeled illustrations 20 marks