(*Knowledge for Development*)

# KIBABII UNIVERSITY

## UNIVERSITY EXAMINATIONS 2016/2017 ACADEMIC YEAR

## THIRD YEAR SECOND SEMESTER SPECIAL/SUPPLEMENTARY EXAMINATION

### FOR THE DEGREE OF BACHELOR OF SCIENCE IN BIORESOURCE MANAGEMENT AND CONSERVATION

**COURSE CODE:** SZL 324
**COURSE TITLE:** THEORITICAL ECOLOGY

**DATE:** 17th October, 2018 **TIME:** 11:30 -1:30 p.m.

**INSTRUCTIONS TO CANDIDATES**

Answer Question one (1) and any other two (2) Questions. Question one is compulsory and carries 30 marks, the other Questions carry 20 marks each.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over

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1. a) Define the following terms:
   i. Modular populations (1 mark)
   ii. Minimum viable population (1 mark)
   iii. Physiological longevity (1 mark)
   iv. Commensalism (1 mark)
   v. Competitive exclusion (1 mark)

   b) Briefly describe the procedure of measuring a niche breadth (5marks)
   c) With relevant examples, briefly describe the concept of resource partitioning (5 marks)
   d) With an aid of a diagram describe species- area relationship (5 marks)
   e) Briefly explain five attributes that Influences the equilibrium number of species (5 marks)
   f) Briefly explain the patterns of population dispersion (5 marks)
2. Describe the models of population dynamics in an ecosystem (20 marks)
3. Describe the composition and structure of a community (20 marks)
4. Discuss the concept of competition in inter and intra species interactions in an ecosystem (20 marks)
5. Discuss the qualitative characteristics of communities (20 marks)