



MACHAKOS UNIVERSITY

University Examinations 2017/2018

SCHOOL OF HUMANITIES AND SOCIAL SCIENCE

DEPARTMENT OF SOCIAL SCIENCES

FOURTH YEAR SECOND SEMESTER EXAMINATION FOR

BACHELOR OF EDUCATION (ARTS)

BACHELOR OF EDUCATION (SCIENCE)

BACHELOR OF ARTS

AGE 403: APPLIED BIOGEOGRAPHY

Date: 8/12/2017

Time: 2:00 – 4:00 PM

INSTRUCTIONS

Answer Question One and Any Other Two Questions

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Describe the following concepts:
 - i. Predation (3 marks)
 - ii. Mutualism (3 marks)
 - iii. Commensalism (3 marks)
 - iv. Biogeography (3 marks)
- b) State two laws of Thermodynamics. (4 marks)
- c) Distinguish between the concepts tropical and temperate biomes. (8 marks)
- d) Describe Allee effect on potential extinction. (6 marks)

QUESTION TWO (20 MARKS)

Discuss the factors that influence species distribution in a community.

QUESTION THREE (20 MARKS)

- a) Evaluate how the principle of Island biogeography can inform the design of protected areas. (12 marks)
- b) Explain four fundamental principles of the local agenda 21 as used in human settlement studies. (8 marks)

QUESTION FOUR (20 MARKS)

Examine the implication of intellectual property rights in biodiversity conservation and economic development.

QUESTION FIVE (20 MARKS)

- a) Discuss the flow of energy in an ecosystem. (10 marks)
- b) Biodiversity is a major asset of East Africa. Discuss. (10 marks)