



MACHAKOS UNIVERSITY

University Examinations for 2018/2019 Academic Year

SCHOOL OF HUMANITIES AND SOCIAL SCIENCES

DEPARTMENT OF SOCIAL SCIENCES

.....YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF EDUCATION (ARTS)

BACHELOR OF ARTS

AGE 403: APPLIED BIOGEOGRAPHY

DATE:

TIME:

INSTRUCTIONS: Answer QUESTION ONE and any other TWO QUESTIONS

1. a) Describe the following concepts:
 - i. Biotechnology (2 marks)
 - ii. Aquaculture (2 marks)
 - iii. Intellectual property rights (2 marks)
 - iv. Biosphere (2 marks)
- b) Describe the significance of food chains and food webs in an ecosystem (4 marks)
- c). Distinguish between exponential and geometric population growth (6 marks)
- d) Examine the ways in which forests provides ecological services (8 marks)
- e). Describe Allee effects on potential extinction (4 marks)
2. Giving examples, explain the different types of stochastic threats in an ecosystem (20 marks)
- 3 a). Discuss the implication of intellectual property rights on biodiversity and economic development (12 marks)
- b). Explain four fundamental principles of the local agenda 21 (8 marks)
- 4 Examine the implication of intellectual property rights on biodiversity and economic development (20 marks)
5. a) Discuss the flow of energy in an ecosystem (10 marks)
- b) “Biodiversity is a major asset of East Africa “. Discuss (10 marks)