



MACHAKOS UNIVERSITY

University Examinations for 2019/2020 Academic Year

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

DECEMBER SESSION EXAMINATION FOR

BACHELOR OF EDUCATION SCIENCE

SZL 412 : APPLIED ECOLOGY

DATE: SCHOOL BASED

TIME : 2 HOURS

INSTRUCTIONS

1. Answer Question 1 (compulsory) and **any two** questions in Section B.
2. Use clean well labelled diagrams wherever appropriate.

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Explain ecological sustainability as used in applied ecology. (3 marks)
- b) Explain how species richness can be promoted in an ecosystem (3 marks)
- c) Explain the role of competitive exclusion principle in an ecosystem with a case study (3 marks)
- d) Explain the impact of global warming on a named ecosystem (3 marks)
- e) Explain how the type of growth of Kenyan population impact on the development of the economy. (3 marks)
- f) Explain the role of commensalism in nature siting two examples (3 marks)
- g) Explain how IUCN facilitate species conservation (3 marks)
- h) Highlight the effects of greenhouse gases on insect behavior (3 marks)

i) Explain three levels of diversity in community ecology (3 marks)

j) Highlight impacts of natural disturbance on the ecosystem. (3 marks)

SECTION B: ANSWER ANY TWO (2) QUESTIONS (TOTAL 40MARKS)

QUESTION TWO (20 MARKS)

Discuss the implications of time and species ecological principles on implications for land use and land-management decisions.

QUESTION THREE (20 MARKS)

Discuss the progress and strategies put in place by the government of Kenya to conserve wildlife.

QUESTION FOUR (20 MARKS)

Discuss the effect of Greenhouse gases on animal populations

QUESTION FIVE (20 MARKS)

Loss of biodiversity has greatly been caused by Humans. Discuss