



MACHAKOS UNIVERSITY

University Examinations 2018/2019

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

FOURTH YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF SCIENCE IN BIOLOGY

SZL 412:APPLIED ECOLOGY

DATE: 25/7/2019

TIME: 11.00-1.00 PM

INSTRUCTIONS: answer question one and any other questions

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

SECTION A

QUESTION ONE COMPULSORY (30 MARKS)

- a) Explain the meaning of stability, stress and carrying capacity in management of various ecosystems (3 marks)
- b) Outline the New IUCN threatened species categories (3 marks)
- c) State the major factors that promote species richness in ecosystems (3 marks)
- d) Explain the meaning of game cropping and game culling (3 marks)
- e) Describe the impacts of global warming to different ecosystems (3 marks)
- f) State the importance of disturbances to an ecosystem (3 marks)
- g) Discuss the biological control methods of management of agricultural pests (3 marks)
- h) Describe the comparative advantages of wild animals domestication in Africa (3 marks)
- i) Outline various wildlife conservation systems in Kenya (3 marks)
- j) Describe the purpose and process of any Environmental Impact Assessment (3 marks)

QUESTION TWO

Using a graph illustrate and explain the use of carrying capacity in exploitation of agricultural resources (20 marks)

QUESTION THREE

Explain the effects of natural disturbance on the ecosystem (20 marks)

QUESTION FOUR

Discuss how human impacts on the environment have led to loss of biodiversity (20 marks)

QUESTION FIVE

Discuss the progress made towards conservation of biodiversity in Kenya (20 marks)