



MACHAKOS UNIVERSITY
University Examinations for 2019/2020 Academic Year
SCHOOL OF PURE AND APPLIED SCIENCES
DEPARTMENT OF BIOLOGICAL SCIENCES
SECOND YEAR SECOND SEMESTER EXAMINATION FOR
BACHELOR OF SCIENCE (BIOLOGY)
SZL 412: APPLIED ECOLOGY

DATE: 26/10/2020

TIME: 2:00 – 4:00 PM

INSTRUCTIONS

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

SECTION A: COMPULSORY

QUESTION ONE (30 MARKS)

- a) Outline the process of biomagnification. (3 marks)
- b) Describe the formation of acid rain. (3 marks)
- c) Explain biological legacies. (3 marks)
- d) Describe effects of ecological disturbances. (3 marks)
- e) Explain the coarse and fine filter approach in ecosystem management. (3 marks)
- f) Distinguish between primary and secondary succession. (3 marks)
- g) Illustrate the effect of disturbance frequency on species recovery (3 marks)
- h) Explain how the use of DDT and Veterinary Diclophenac affect the birds of prey (3 marks)
- i) Describe how noise pollution affects the reproductive potential of birds. (3 marks)
- j) Outline the effects of light pollution on aquatic life. (3 marks)

SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)

QUESTION TWO (20 MARKS)

Discuss desertification and its mitigation measures

QUESTION THREE (20 MARKS)

- a) Discuss the causes of air pollution and its impacts on the ecosystem. (10 marks)
- b) Discuss the impacts of noise pollution on human health. (10 marks)

QUESTION FOUR (20 MARKS)

Discuss possible solutions to five major environmental issues in Kenya.

QUESTION FIVE (20 MARKS)

Describe the agro-ecological Zones in Kenya