



MACHAKOS UNIVERSITY

University Examinations for 2019/2020 Academic Year

SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF ENVIRONMENTAL SCIENCES

FOURTH YEARSEMESTER EXAMINATION FOR

BACHELOR OF ENVIRONMENTAL STUDIES (RESOURCE CONSERVATION)

ERC 411: BIOLOGICAL CONTROL AND ENVIRONMENT

DATE:

TIME:

INSTRUCTIONS;

Answer question ONE and any other TWO questions

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Discuss parasitoidal insects as biological control agents. (10 marks)
- b) Explain the importance of risk assessment before investing in a biocontrol programme in Kenya. (10 marks)
- c) Explain the mechanical adaptations of herbivores to plant defenses. (10 marks)

QUESTION TWO (20 MARKS)

Discuss the classical biological control method. (20 marks)

QUESTION THREE (20 MARKS)

- a) Describe the potential taxonomic range of predatory organisms that can be applied in a biocontrol programme in Kenya. (12 marks)
- b) Describe the mechanism of mating disruption as applied in biological control. (8 marks)

QUESTION FOUR (20 MARKS)

As an expert hired by the Machakos County Government, explain how biological control agents could be identified and introduced in a weed control programme.

QUESTION FIVE (20 MARKS)

Describe the foraging cycle of a predator. (20 marks)