



MACHAKOS UNIVERSITY

University Examinations for 2022/2023 Academic Year

SCHOOL OF AGRICULTURE, ENVIRONMENT AND HEALTH SCIENCES

DEPARTMENT OF ENVIRONMENTAL SCIENCES

SECOND YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF ENVIRONMENTAL SCIENCE

ENS 230: ENVIRONMENTAL ECOLOGY

DATE:

TIME:

INSTRUCTIONS: Answer question ONE and any other TWO questions

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Outline five branches of ecology. (5 marks)
- b) Explain the importance of population models in natural resources management. (5 marks)
- c) Explain five characteristics that are unique to deserts. (10 marks)
- d) Explain how mangroves limit salt intake in the marine environment. (5 marks)
- e) Discuss the effects of density-dependent factors on fauna density. (5 marks)

QUESTION TWO (20 MARKS)

Discuss five human induced disturbances that are a threat to Kenyan savanna ecosystems.

QUESTION THREE (20 MARKS)

As a National Park Manager, discuss the various species interactions which you would take into account for the sustainability of nature.

QUESTION FOUR (20 MARKS)

Discuss natural selection as a process that leads to adaptation of a population to its environment.

QUESTION FIVE (20 MARKS)

- a) Differentiate between primary and secondary succession. (10 marks)

b) Describe the nitrogen cycle.

(10 marks)