



# MACHAKOS UNIVERSITY

University Examinations for 2020/2021 Academic Year

SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF ENVIRONMENTAL SCIENCES

SECOND YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF ENVIRONMENTAL STUDIES (RESOURCE CONSERVATION)

ENS 230: ENVIRONMENTAL ECOLOGY

DATE: 26/3/2021

TIME: 8.30-10.30 AM

---

## INSTRUCTIONS;

Answer question ONE and any other TWO questions

### QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Discuss weathering as an important process affecting the physical structure of desert environments. (10 marks)
- b) Explain how mangroves are adapted to the unstable intertidal marine habitats. (5 marks)
- c) Describe the term "Population Life Tables" as applied in population ecology. (5 marks)
- d) Explain the climatic conditions of temperate rain forests. (10 marks)

### QUESTION TWO (20 MARKS)

Discuss the ecological importance of wetland ecosystems.

### QUESTION THREE (20 MARKS)

- a) Using illustrations, describe three types of ecological pyramids. (10 marks)
- b) With the aid of illustrations, describe three types of population survivorship curves. (10 marks)

### QUESTION FOUR (20 MARKS)

- a) Discuss the logistic population growth model. (10 marks)
- b) Explain three types of natural selections in populations. (10 marks)

### QUESTION FIVE (20 MARKS)

- a) Discuss fire as an important factor structuring chaparral environments. (10 marks)
- b) Discuss five factors that threaten the taiga biome. (10 marks)