



MACHAKOS UNIVERSITY

University Examinations for 2018/2019 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)

BACHELOR OF ENVIRONMENTAL (SCIENCES)

ENS 230: ENVIRONMENTAL ECOLOGY

DATE: 23/7/2019

TIME: 2.00-4.00 PM

INSTRUCTIONS:

Answer question ONE and any other TWO questions

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Describe five branches of Environmental Ecology (5 marks)
- b) Using examples, explain how plants are adapted to the tundra biome environment (10 marks)
- c) Explain the importance of population models (5 marks)
- d) Discuss five parameters that can be used to describe plant communities structure in the Mau forest (5 marks)
- e) What is the importance of wetland ecosystems in climate change mitigation (5 marks)

QUESTION TWO (20 MARKS)

Explain the effect of human activities on the temperate deciduous forests (20 marks)

QUESTION THREE (20 MARKS)

- a) Discuss weathering as an important process affecting the physical structure of desert environments (10 marks)
- b) With the aid of diagrams, describe three types of population survivorship curves (10 marks)

QUESTION FOUR (20 MARKS)

- a) Describe FOUR ways through which speciation is induced in populations (10 marks)
- b) Write an essay on the nitrogen cycle (10 marks)

QUESTION FIVE (20 MARKS)

Discuss FIVE types of species interactions in an ecosystem (20 marks)