



MACHAKOS UNIVERSITY

University Examinations for 2018/2019 Academic Year

SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF ENVIRONMENTAL SCIENCES

THIRD YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR
BACHELOR IN ENVIRONMENTAL STUDIES (RESOURCE CONSERVATION)

ERC 321: WATER AND MARINE RESOURCES MANAGEMENT

DATE: 25/7/2019

TIME: 2.00-4.00 PM

INSTRUCTIONS:

Answer question ONE and any other TWO questions

QUESTION ONE (30 MARKS)

- a) Explain the meaning of the following
- | | |
|----------------------|-----------|
| i. Lotic ecosystems | (2 marks) |
| ii. Eutrophication | (2 marks) |
| iii. Water pollution | (2 marks) |
| iv. Coral reefs | (2 marks) |
| v. Heavy metals | (2 marks) |
- b) Explain the effects of heavy metals to fresh water and marine resources in Kenya
(10 marks)
- c) Explain five physicochemical characteristics of water and their influence on productivity and survival of aquatic life
(10 marks)

QUESTION TWO (20 MARKS)

Discuss the major challenges faced in the management of lake Naivasha fisheries resources and suggest possible ways in which they can be managed sustainably (20 marks)

QUESTION THREE (20 MARKS)

Using examples, explain the benefits of marine resources to local communities living along the Kenyan Coast line

QUESTION FOUR (20 MARKS)

- a) Using examples, explain the effects of physical alternation of aquatic ecosystems in Kenya (10 marks)
- b) Discuss the principles of Integrated Water Resources Management (10 marks)

QUESTION FIVE (20 MARKS)

Describe the basic steps followed in land use planning