



MACHAKOS UNIVERSITY

University Examinations for 2019/2020 Academic Year

SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF ENVIRONMENTAL SCIENCES

THIRD YEAR SECOND SEMESTER EXAMINATION FOR

BACHELOR OF ENVIRONMENTAL STUDIES (ENVIRONMENTAL RESOURCE
CONSERVATION)

ERC 321: WATER AND MARINE RESOURCES MANAGEMENT

DATE: 11/11/2020

TIME: 8.30-10.30 AM

INSTRUCTIONS:

Answer question ONE and any other TWO questions

QUESTION ONE (30 MARKS)

- a) Explain the meaning of the following
- i. Aquatic ecosystem (2 marks)
 - ii. Estuary (2 marks)
 - iii. Artisanal fisheries (2 marks)
 - iv. Coral reefs (2 marks)
 - v. Land use planning (2 marks)
- b) Explain the principles of integrated water resources management as applied in Kenya. (10 marks)
- c) Explain how water quality influences productivity and survival of aquatic life. (10 marks)

QUESTION TWO (20 MARKS)

Discuss the management options put in place by different stakeholders for sustainability of Lake Naivasha fishery resources

QUESTION THREE (20 MARKS)

The National government of Kenya has been making a lot of effort to increase water availability to citizens by damming of rivers. Discuss the ecological impacts associated with construction of reservoirs along riverine systems in Kenya and suggest possible mitigation measures.

QUESTION FOUR (20 MARKS)

Discuss the impacts of industrial wastes on aquatic resources in Kenya.

QUESTION FIVE (20 MARKS)

Citing examples, discuss the ecological effects of pollutants from agricultural sector on aquatic ecosystems.