



# 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 STUDIES (COMMUNITY DEVELOPMENT) BACHELOR OF SCIENCE (COMMUNITY RESOURCE MANAGEMENT)

**ECD 204: PRINCIPLES OF NATURAL RESOURCE MANAGEMENT**

**DATE:**

**TIME:**

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**INSTRUCTIONS:** Answer Question **ONE (Compulsory)** and any other **TWO** Questions

## QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Citing relevant examples, explain the following:
- i. Polluter pays principle (2 marks)
  - ii. Adaptive natural resource management (2 marks)
  - iii. Precautionary principle (2 marks)
  - iv. Community-based Natural Resource Management (2 marks)
  - v. Sustainable development (2 marks)
- b) Explain the challenges in natural resources management in Kenya (10 marks)
- c) Explain the linkages between ecosystem services and human well-being (10 marks)

## QUESTION TWO (20 MARKS)

- a) “To overcome the shortcomings of traditional natural resources management, it is necessary to facilitate shifts in management paradigms”. Discuss this statement using suitable examples. (10 marks)
- b) Explain the critical elements for adaptive management of natural resources (10 marks)

**QUESTION THREE (20 MARKS)**

Discuss the key requirements for sustainable natural resource management in Kenya

**QUESTION FOUR (20 MARKS)**

Discuss the salient features of an effective community-based natural resource management initiative

**QUESTION FIVE (20 MARKS)**

As the head of environment department in a county, discuss the principles you would adopt in implementation of an ecosystem approach for sustainable use of natural resources