



# MACHAKOS UNIVERSITY

University Examinations For 2023/2024 Academic Year

SCHOOL OF AGRICULTURE, ENVIRONMENT AND HEALTH SCIENCES

DEPARTMENT OF ENVIRONMENTAL SCIENCES

SECOND YEAR FIRST SEMESTER EXAMINATIONS FOR

BACHELOR OF SCIENCE IN COMMUNITY RESOURCE MANAGEMENT

ERC 210: CLIMATE CHANGE AND RESOURCES MANAGEMENT

**DATE:** \_\_\_\_\_ **TIME:** \_\_\_\_\_

**INSTRUCTIONS:** Answer question ONE and any other TWO

## QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Explain the following terms:
- (i) Climate change fingerprinting (2 marks)
  - (ii) Climate change mitigation (2 marks)
  - (iii) Microclimates (2 marks)
  - (iv) Greenhouse effect (2 marks)
  - (v) Global warming (2 marks)
- b) Describe the five major components of a climate system. (10 marks)
- c) Explain how Kenyan local communities can benefit from carbon trading activities. (10 marks)

## QUESTION TWO (20 MARKS)

Describe five climate groups according to Köppen climate classification system.

## QUESTION THREE (20 MARKS)

Assuming that the Kenyan Government wants to initiate a programme on climate change, discuss the human-related causes of climate change which such a programme can target.

## QUESTION FOUR (20 MARKS)

Discuss the various coping strategies which local communities can use to adapt to climate change crisis in the Kenyan agricultural sector.

## QUESTION FIVE (20 MARKS)

Discuss the impacts of climate change on water resources in Kenya.