



# **MACHAKOS UNIVERSITY**

University Supplementary Examinations For 2020/2021 Academic Year  
**SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT**

**DEPARTMENT OF ENVIRONMENTAL SCIENCES**

**SECOND YEAR SUPPLEMENTARY EXAMINATIONS FOR THE DEGREE OF**

**BACHELOR OF ENVIRONMENTAL SCIENCE**

**ENS 230: ENVIRONMENTAL ECOLOGY**

**DATE:**

**TIME:**

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

## **QUESTION ONE (COMPULSORY) (30 MARKS)**

- a) Explain nitrogen fixation as a key process in the nitrogen cycle. (5 marks)
- b) Outline FIVE parameters which you would use to describe the structure of plant community. (5 marks)
- c) Discuss allopatric speciation as an evolutionary process. (5 marks)
- d) Discuss ecology as an interdisciplinary science. (5 marks)
- c) Discuss FIVE general characteristics of deserts. (10 marks)

## **QUESTION TWO (20 MARKS)**

Discuss factors that are a threat to African savanna ecosystems.

## **QUESTION THREE (20 MARKS)**

Discuss types of species interactions in ecosystems.

## **QUESTION FOUR (20 MARKS)**

Discuss the ecological importance of wetland ecosystems in Kenya.

## **QUESTION FIVE (20 MARKS)**

Primary succession is a type of ecological succession of plant life. Discuss.