



# **MACHAKOS UNIVERSITY**

## **SCHOOL OF ENVIRONMENTAL STUDIES AND NATURAL RESOURCE MANAGEMENT**

### **DEPARTMENT OF ENVIRONMENTAL SCIENCE**

#### **First Year Second Semester Supplementary Examination for Bachelor of Environmental Science**

#### **ECD 109: HUMAN ECOLOGY AND ADAPTATION**

**Date: xxx**

**Time:xxxx**

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**Instructions: Answer question ONE and any other TWO questions**

#### **QUESTION ONE (30 Marks)**

- a) Describe the segments of ecosystems (10 marks)
- b) Discuss any FIVE types of water erosion (10 marks)
- c)
  - i. Describe the fundamental ideas that entail Darwin's theory of evolution (6 marks)
  - ii. What are the four components of Darwin's theory of natural selection? (4 marks)

#### **Question Two**

Using examples, describe the Gaia hypothesis (20 marks)

#### **Question Three**

Discuss the two types of ecosystem feedbacks and how they impact habitats in Kenya (20 marks)

#### **Question Four**

Discuss the carbon cycle and it's importance (20 marks)

**Question Five**

Discuss the FIVE basic types of societies that have existed over the course of human history. (20 marks)