



# **MACHAKOS UNIVERSITY**

University Examinations for 2018/2019 Academic Year

**SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT**

**DEPARTMENT OF ENVIRONMENTAL SCIENCES**

**THIRD YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR  
BACHELOR IN ENVIRONMENTAL STUDIES (RESOURCE CONSERVATION)**

**ERC 316: MULTIPLE USE FOREST MANAGEMENT**

**DATE: 26/9/2019**

**TIME:8.30-10.30 AM**

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## **INSTRUCTIONS:**

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

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

- a) Define the words a Forest and Forest Management and describe three functions of a forest in an ecosystem (10 marks)
- b) Differentiate between Global warming and climate change and enlist the factors contributing to global warming in Kenya (10 marks)
- c) Explain what ground fire, surface and crown fires mean and give their potential severity of each type of fire to the forest ecosystem (10 marks)

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

Discuss the purposes and techniques for Multiple use Management concept in an ecosystem

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

Outline the factors you will consider when managing a plantation forest for timber production as a forest manager in Kenya

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

Describe the effects of forest fires on the micro - organisms in a forest ecosystem and outline the measures you will use to prevent any further fire outbreak in the forest (20 marks)

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

As the forest manager of Kakamega forest explain what you understand by Biodiversity conservation and enumerate the steps you will take to manage the forest for biological diversity function.