



# **MAASAI MARA UNIVERSITY**

**REGULAR UNIVERSITY EXAMINATIONS  
2019/2020 ACADEMIC YEAR  
FOURTH YEAR FIRST SEMESTER**

**SCHOOL OF NATURAL RESOURCES AND  
ANIMAL SCIENCES  
THE DEGREE OF BACHELOR OF SCIENCE IN  
FOREST ECOSYSTEM**

**COURSE CODE: FEM 4127  
COURSE TITLE: SUSTAINABLE FOREST  
MANAGEMENT PRACTICES**

**DATE: 2<sup>ND</sup> DECEMBER 2019**

**TIME: 0830 – 1030 HRS**

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## **INSTRUCTIONS TO CANDIDATES**

Answer **ALL** questions in section **A** and any other **THREE** in section **B**.

*This paper consists of 2 printed pages. Please turn over.*

**SECTION A (25 MARKS) ANSWER ALL QUESTIONS IN THIS SECTION**

1. Differentiate between **Forest Management** and **Sustained Yields** as used in this course **(4 marks)**
2. a) Identify effects of fire on forest ecosystems **(3 marks)**  
b) Illustrate uses of prescribed fire in land management **(3 marks)**
3. a) Define forest rotation **(1 mark)**  
b) Highlight importance of forest rotation **(4 marks)**
4. a) What do you understand by the word “**record keeping**” as used in forestry **(1 mark)**  
b) Using examples, briefly describe objectives of forest management **(4 marks)**
5. Briefly describe common models / techniques used in forestry management **(5 marks)**

**SECTION B (45 MARKS) ANSWER ANY THREE QUESTIONS IN THIS SECTION**

6. Investing in forestry will require key decision to be made. Discuss these decisions making to be done in order to invest in a forestry enterprise **(15 marks)**
7. Discuss methods of firefighting in natural and plantation forestry **(15 marks)**
8. Discuss major types of rotations in plantation forestry **(15 marks)**
9. Discuss factors which influence fire behavior in a forest ecosystem **(15 marks)**
10. Assume that you are employed by Kenya Forest Service as a lead Consultant in developing Forest Management Plan for Londiani Forest Station in Kericho County which has natural forest and plantation forestry. Using examples, describe the main Components of forest management plan for that station **(15 marks)**

**//END**