



MAASAI MARA UNIVERSITY

**REGULAR UNIVERSITY EXAMINATION
2018/2019 ACADEMIC YEAR**

**SCHOOL OF TOURISM AND NATURAL
RESOURCE MANAGEMENT
BACHELOR OF SCIENCE IN FOREST
ECOSYSTEM MANAGEMENT
THIRD YEAR FIRST SEMESTER**

**COURSE CODE: FEM 3120
COURSE TITLE: AGROFORESTRY**

DATE: 5TH DECEMBER 2018

TIME: 0830 – 1030 HRS

- INSTRUCTIONS:**
1. Answer **ALL** questions in Section A (25 marks)
 2. Answer any **THREE** questions from Section B (45 marks)

SECTION A (25 MARKS) ANSWER ALL THE QUESTIONS

1. a) Define the following terms and concepts as used in agroforestry **(4 marks)**
 - i. Agroforestry
 - ii. Plant productivity
 - iii. Agroforestry systems
 - iv. Trees
2. a) Describe **three** research principles of agroforestry field experimentation **(3 marks)**
 - b) Describe **two** major photosynthetic pathways **(2 marks)**
3. Explain the **five stages** of diagnosis and design in agroforestry methodology **(5 marks)**
4. a) Identify the **main** challenges one encounters while conducting agroforestry research on farmers fields **(3 marks)**
 - b) Explain **three** attributes of agroforestry **(3 marks)**
5. Evaluate the reasons for practicing agroforestry in the same land management unit **(5 marks)**

SECTION B (45 MARKS) ANSWER ANY THREE QUESTIONS

6. a) Analyze the potential of nitrogen improvement through agroforestry system **(6 marks)**
 - b) Discuss how agroforestry can help farmers adapt to climate change **(9 marks)**
7. Discuss the potentials of agroforestry in catchment rehabilitation **(15 marks)**
8. Using examples, discuss the classification of agroforestry systems based on structural basis **(15 marks)**
9. a) Describe **key features** of diagnosis and design in agroforestry methodology **(5 marks)**
 - b) Discuss the opportunities and constraints of agroforestry in developing countries **(10 marks)**
10. Using examples, explain how agroforestry affects acidic and alkaline soils **(15 marks)**

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