



MAASAI MARA UNIVERSITY

REGULAR UNIVERSITY EXAMINATIONS

2023/2024 ACADEMIC YEAR

FIRST YEAR FIRST SEMESTER

**SCHOOL OF NATURAL RESOURCE,
ENVIRONMENTAL STUDIES AND
AGRICULTURE**

**BACHELOR OF SCIENCE IN FOREST
ECOSYSTEM MANAGEMENT**

COURSE CODE: SFEM 1105-1

COURSE TITLE: PLANT ECOLOGY

DATE: 29/1/2024

TIME: 0830-1030 HRS

INSTRUCTIONS TO CANDIDATES

Answer **All** the Questions in Section A and any **THREE** IN SECTION B

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

SECTION A (20 MARKS) ANSWER ALL QUESTIONS IN THIS SECTION

1. Define the following terms as used in forest ecology;

- a) Plant Ecology **(1 Mark)**
- b) Ecological pyramid **(2 Marks)**
- c) Food web **(1 Mark)**
- d) Net primary productivity **(2 Marks)**

2. Describe any five (5) main factors that determine the productivity of a terrestrial ecosystem **(4 marks)**

3. Describe the different factors that will influence species diversity and plant communities in a given forest ecosystem **(6 Marks)**

4. Explain how plants contribute to the cycling of nutrients in a forest ecosystem **(4 Marks)**

SECTION B: ANSWER ANY THREE QUESTIONS(30 MARKS)

5. Discuss the ways in which plants can respond to environmental changes **(10 Marks)**

6. Using a suitable diagram, explain the process of energy flow in a forest ecosystem **(10 Marks)**

7. Using a suitable diagram discuss the carbon cycle **(10 Marks)**

8. Describe the methods of fixing atmospheric nitrogen in an ecosystem **(10 Marks)**

/END/