



# **MAASAI MARA UNIVERSITY**

**REGULAR UNIVERSITY EXAMINATIONS  
2023/2024 ACADEMIC YEAR  
FIRST YEAR FIRST SEMESTER**

**SCHOOL OF NATURAL RESOURCE,  
ENVIRONMENTAL STUDIES & AGRICULTURE  
DIPLOMA IN TOURISM AND WILDLIFE  
MANAGEMENT**

**COURSE CODE: NDTW 116  
COURSE TITLE: INTRODUCTION TO ECOLOGY.**

**DATE: 29/1/2024**

**TIME: 1430 1630 HRS**

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**Instructions:**

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

**SECTION A – (25 MARKS)**

1. Differentiate between the following terms as used in ecology **(8marks)**

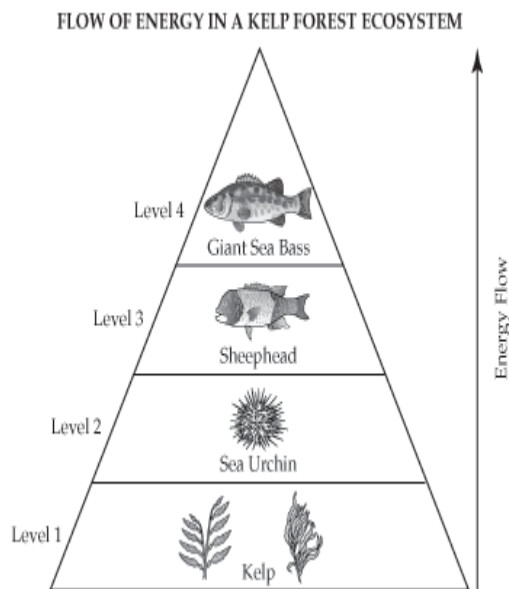
- a) Nocturnal animals
- b) Diurnal animals
- c) Indicator species
- d) Keystone species
- e) Commensalism
- f) Ammensalism
- g) A food chain
- h) A food web

2. Name **FOUR** strategies used by prey to avoid predation **(4marks)**

3. Name **THREE** emerging technologies in wildlife conservation and research **(3marks)**

4. State the **FOUR** principal steps in the operation of ecosystem **(4marks)**

5. Assuming that in the energy pyramid below, the 1<sup>st</sup> trophic level (producers) has 7000 kJ of energy. Calculate how much energy will be available at the 4<sup>th</sup> trophic level? **(3marks)**



6. State three distinguishing characteristics of K selected species **(3marks)**

**SECTION B (45MARKS)**

**QUESTION SEVEN**

- a) Giving example in each case, differentiate between interspecific competition and intraspecific competition. **(3marks)**
- b) Discuss the levels of organization in an ecosystem **(12marks)**

**QUESTION EIGHT**

- a) Name five methods that can be used to estimate population of animals **(5marks)**
- b) Explain considerations you would make before choosing the methods to use to estimate population of animals. **(10marks)**

**QUESTION NINE**

- a) Using examples, distinguish between biotic and abiotic factors as used in ecology **(3marks)**
- b) Discuss how abiotic factors affect a forest **(6marks)**
- c) Discuss how biotic factors affect a forest **(6marks)**

**QUESTION TEN**

- a) What are some of the threats to climax communities **(3marks)**
- b) Using illustrations, discuss primary and secondary ecological successions **(12marks)**

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