# MAASAI MARA UNIVERSITY

**REGULAR UNIVERSITY EXAMINATIONS
2018/2019 ACADEMIC YEAR
FIRST YEAR SEMESTER TWO**

**SCHOOL OF TOURISM
CERTIFICATE IN TOURISM AND WILDLIFE
MANAGEMENT**

**COURSE CODE:  CTW 008
COURSE TITLE: INTRODUCTION TO ECOLOGY**

**DATE: 23RD AUGUST 2019**                          **TIME: 0830-1030 HRS**

**INSTRUCTION TO CANDIDATES**
This paper has two sections A & B.
Answer question **ONE** in section A and any **TWO** in section B.

**SECTION A:**
**QUESTION 1.**
   (a) With relevant examples explain the following terms as used in ecology.
                                                                                                (6mks)

      i.    Ammensalism
      ii.   Commensalism
      iii.  Mutualism
   (b) While giving an example in each case differentiate between the r-selection
   and k-    selection evolutionary strategies employed by organisms.  (10mks)

   c)  (i) What is population dynamics?                                          (1mk)
      (ii) Distinguish between primary and secondary ecological events (2mks)
      (iii) With examples describe the two categories of secondary ecological events
                                                                                                (4mks)
   (d) Describe the factors that enable the ecosystem to be a self-sustaining unit.
                                                                                                (7mks)

   **SECTION B: Answer any TWO questions.**
**QUESTION 2.**
   (a)   Explain the term ecological niche.                                     (2mks)
   (b)   With examples describe the trophic levels in an ecosystem      (12mks)
   (c)    Distinguish between primary and secondary productivity giving examples.
                                                                                                (3mks)
   (d) Secondary ecological succession is usually much quicker than primary
        succession. Give three reasons.                                         (3mks)

**QUESTION 3.**
   (a)  Define the term competition.                                           (1mk)
   (b) Describe the three possible evolutionary outcomes of interspecific
        competition                                                            (6mks)
   (c)   (i)  What are ecological indicators? Give an example and state the
              condition it indicates.                                          (4mks)
        (ii) In what ways do these indicators contribute to evaluation of policy
              development?                                                     (3mks)
   (d) Describe the levels of organization in an ecosystem                     (6mks)

**QUESTION 4.**
   (b) Define the term environmental carrying capacity                         (1mk)
   (c) With an aid of a diagram describe the structure of an ecosystem.
                                                                                                (10mks)
   (d) Using illustrations distinguish between food chain and food pyramid
                                                                                                (3mks)
   (e) With the aid of diagrams describe the population growth patterns that are
        likely to result as the population density approaches the carrying capacity.
                                                                                                (6mks)
**//END**