MAASAI MARA UNIVERSITY

REGULAR UNIVERSITY EXAMINATIONS
2018/2019 ACADEMIC YEAR
SECOND YEAR END OF FIRST SEMESTER

SCHOOL OF SCIENCE AND INFORMATION SCIENCES
FOR
BACHELOR OF SCIENCE
COURSE TITLE: ZOO 2207
COURSE TITLE: INTRODUCTION TO ECOLOGY AND BIOANALYSIS

DATE: 18TH APRIL 2019   **TIME: 1430 - 1630 HRS**

INSTRUCTIONS TO CANDIDATES

1. Answer **ANY 10** questions

2. Illustrate your answers with suitable diagrams and give examples wherever necessary.

1. Differentiate between the following

   a) Population and community   (2 marks)
   b) Primary consumer and secondary consumer   (2 marks)
   c) Ecosystem and habitat   (2 marks)
   d) Biotic and abiotic   (1 mark)
2. Explain the structural components of a named ecosystem   (7 marks)
3. Describe two methods used to determine population size of animals (7 marks)
4. Explain the role of microorganisms in the nitrogen cycle   (7 marks)
5. Explain energy flow in an ecosystem   (7 marks)
6. Describe the mark-release-recapture method for population estimates (7 marks)
7. What is the respective importance of water, carbon and nitrogen for living things? (7 marks)
8. With an illustration, explain the meaning of pyramid of numbers (7marks)
9. Construct a grazing food chain containing at least 4 trophic levels (7 marks)
10.   Name an ecosystem you have studied and construct a simple food chain in that ecosystem (7 marks)
11.   Using a food web from your field study (3 marks)
   a) Name one primary producer   (1 marks)
   b) Name one herbivore and one carnivore from the web   (2 marks)
   c) Name one omnivore from the web   (1 marks)
12.   Describe the features of a rain forest ecosystem (7 marks)
13.   Briefly discuss the water cycle (7 marks)

14.   Describe the factors that influence the distribution of plants and
    animals in an ecosystem
            (7 marks)
15.   Explain the effects of carbon accumulation in the atmosphere
            (7 marks)

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