NATIONAL OPEN UNIVERSITY OF NIGERIA
14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS
MARCH/APRIL 2016 EXAMINATION

SCHOOL OF SCIENCE AND TECHNOLOGY

COURSE CODE: **BIO313**
COURSE TITLE: **ANIMAL ECOLOGY**

TIME ALLOWED: **2 HOURS**
INSTRUCTION: ANSWER QUESTION 1 AND ANY OTHER THREE QUESTIONS

1. (a). Explain the historical background of animal ecology **10 marks**

   (b). Differentiate between the following pairs of terms:
   (i) Composition and diversity **2 marks**
   (ii) Habitat and ecological niche **2 marks**
   (iii) Fundamental niche and realised niche **2 marks**
   (iv) Competition and predation. **2 marks**
   (v) Static life table and population growth rate **2 marks**

   (c). Define competition in relation to animal species **2 marks**

   (d). What is the limitation of the k-value concept and why is it difficult to estimate k-value in natural populations? **3 marks**

2. Write briefly on the different types of competition by:
   (i). mechanism **6 marks**
   (ii). species **9 marks**

3. (a). What is animal population control? Discuss briefly the main biotic factors that may limit animal population growth.
   6 marks

   (b). Using appropriate graphs, explain how competition can lead to:
   (i). Extinction

(ii). Resource partitioning

9 marks

4. (a). With a clearly labelled schematic diagram, discuss an ocean detritus food web.

10 marks

(b). Explain the predator-prey population curve presented in Figure 1 below
5 marks

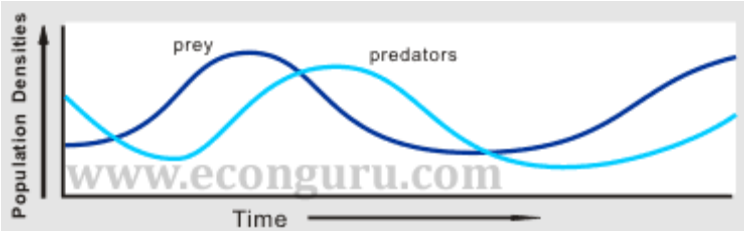

Figure 1: P**redator-prey population curve**

5. Discuss four methods of transfer of information from one animal to another.
15 marks

6. (a). What is age distribution of population? **3 marks**
(b). Using schematic diagrams, differentiate among the three kinds of population defined by age distribution.
6 marks
(c). Summarise the main types of symbiotic relationships in a table listing the type of relationship and the expected outcomes.
6 marks