NATIONAL OPEN UNIVERSITY OF NIGERIA

National Open University Of Nigeria
Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja
Faculty of Science
OCTOBER/NOVEMBER 2016 EXAMINATION

COURSE TITLE: ANIMAL ECOLOGY
COURSE CODE: BIO 313
TIME ALLOWED: 2 HOURS

INSTRUCTION: ANSWER **QUESTION 1** AND **ANY OTHER THREE** QUESTIONS

1. (a). Using Figure 1 below, briefly explain on the relationship between k-value and mortality. **9 marks**

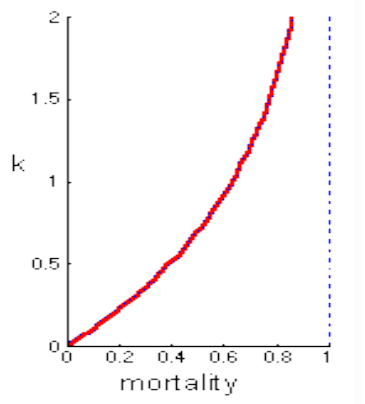

Figure 1. Relationship between mortality and the k-value.

(b). What does Figure 2 below signify? Discuss briefly the features of the chart. **10 marks**

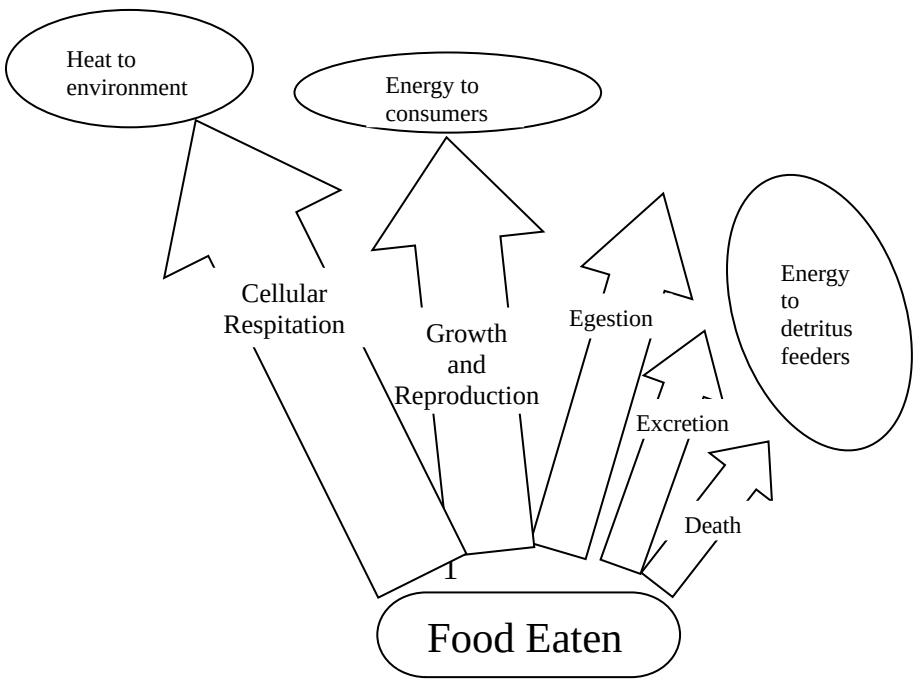

Figure 2

(c). Summarise the main types of symbiotic relationships in a table listing the type of relationship and the expected outcomes. **6 marks**

2. Differentiate between the following pairs of terms:

(i)	Ecosystem and Ecology	**3 marks**
(ii)	Composition and diversity	**2 marks**
(iii)	Habitat and ecological niche	**2 marks**
(iv)	Fundamental niche and realised niche	**2 marks**
(v)	Competition and predation.	**2 marks**
(vi)	Static life table and population growth rate	**2 marks**
(vii)	Factor analysis and K-value in the identification of key-factors of population dynamics	**2 marks**

3. Write briefly on the different types of competition by:

(i). mechanism **6 marks**

(ii). species **9 marks**

4. (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 and (ii). Resource partitioning **9 marks**

5. (a). With a clearly labelled schematic diagram, discuss an ocean detritus food web. **12marks**

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

6. Discuss any thee abiotic factors that affect population. **15 marks**