NATIONAL OPEN UNIVERSITY OF NIGERIA
National Open University of Nigeria
Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja
Faculty of Science
JANUARY, 2021 EXAMINATION

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

INSTRUCTION: ANSWER QUESTION 1 AND ANY OTHER THREE QUESTIONS

1a. State 3 contributions of Arthur G. Tansley to the development of animal ecology (3mks).
b. Differentiate between composition and diversity of a community (2mks).
c. Distinguish between fundamental niche and realized niche (2mks).
d. Discuss the energy flow in an ecosystem (5mks).
e. State and explain 4 major features of the curve for population logistic growth (4mks).
f. Explain the ecology and biology of Lesser African threadfin (*Galeoides decadactylus*)
   (6mks).
g. Discuss the term ecosystem (3mks).

2a. Describe a symbiotic relationship (2mks).
 b. State and explain 3 types of symbiotic relationships (9mks).
 c. State 4 successive recruitment phases of shrimps in Nigerian waters? (4mks).

3a. Briefly explain classic territories (5mks).
 b. Describe the taste and odor of water (4mks).
 c. Describe human population control (6mks).

4a. Discuss the relationships between predators and prey (3mks).
 b. Describe the biotic factors that affect population growth (8mks).
 c. State the contributions of ecologists to population control (4mks).

5a. Explain modeling predator - prey interaction using Lotka-Volterra model (use a graph to illustrate
       your answer) (7mks).
 b. Discuss direct methods of collecting demographic data (4mks).
 c. How does these factors cause Populations change:
       i. mortality (2nks).
       ii. migration (2mks).