



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).
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- 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).
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- 3a. Briefly explain classic territories (5mks).
 - b. Describe the taste and odor of water (4mks).
 - c. Describe human population control (6mks).
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- 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).
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- 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 do these factors cause Populations change:
 - i. mortality (2mks).
 - ii. migration (2mks).