



**ELIZADE UNIVERSITY, ILARA-MOKIN,  
ONDO STATE, NIGERIA**

**BASIC & APPLIED SCIENCES  
BIOLOGICAL SCIENCES  
SECOND SEMESTER EXAMINATION  
2017/2018 ACADEMIC SESSION**

**COURSE CODE: BIO 210  
COURSE TITLE GENERAL PHYSIOLOGY I  
DURATION: 2 HOURS**

A handwritten signature in black ink, enclosed in a rectangular box.

**HOD's  
SIGNATURE**

**NAME:.....MAT. No:.....**

**INSTRUCTION**

**Answer any THREE questions.**

## QUESTIONS

1.
  - a) Discuss the adaptation of animals living in hot environment.
  - b) Explain the difference between
    - i) Diffusion and osmosis
    - ii) Plasmolysis and deplasmolysis
    - iii) Hypertonic and hypotonic
  - c) Why are the osmotic responses in freshwater animals opposite that of marine animals?
  
2.
  - a) Why is excretion indispensable in animals?
  - b) Outline and explain the patterns of excretion on the basis of nitrogenous waste products.
  - c) Explain the stages in urine formation and list three forces involved in net glomerular filtration pressure.
  
3.
  - a)
    - i) What is nutrition and why is it required in animals?
    - ii) List six categories of nutrients you know.
  - b) Write short note on the functions and deficiencies of the following
    - i) Vitamin D
    - ii) Vitamin E
    - iii) Vitamin K
  - c) What are the differences between fat-soluble and water-soluble vitamins?
  
4.
  - a) Describe the digestive process in a typical insect e.g. cockroach.
  - b) Explain the following feeding mechanisms
    - i) Direct deposit feeders
    - ii) Indirect deposit feeders
    - iii) Fluid feeders
  - c) What is the significance of food vacuole in lower invertebrate such as amoeba?
  
5.
  - a) Highlight the reasons why plant and animal need transport system.
  - b) Explain three components of the circulatory system.
  - c) Differentiate between open circulation and close circulation.