



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**14/16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS**  
**SCHOOL OF SCIENCE AND TECHNOLOGY**  
**JUNE/JULY EXAMINATION**

**COURSE CODE: BIO306**

**COURSE TITLE: GENERAL PHYSIOLOGY II**

**TIME ALLOWED: 2 HOURS**

**INSTRUCTION: ANSWER ANY FOUR QUESTIONS**

1ai. Enumerate the factors affecting imbibitions.

ii. Describe the consequences of plasmolysis.

bi. Outline the common defects of the eye.

ii. Briefly explain the following:

(i) mechanism of hearing (ii) perception of body balance

2ai. Enumerate the osmotic challenges animals in the freshwater environment face.

ii. Highlight the factors affecting evaporative water loss in terrestrial animals.

bi. How do terrestrial animals overcome the problems of water loss and water gains

ii. Write short notes on the following nitrogenous waste products:

(i) ammonia (ii) urea (iii) uric acid

3ai. Outline the kinds of water available to plants in the soil.

ii. Differentiate between transpiration and evaporation.

b. Discuss how certain factors affect the rate of water absorption in plants.

4ai. Define the term osmoregulation.

ii. Distinguish between osmoconformers and osmosregulators.

bi. Explain the need for osmoregulation in animals.

ii. Describe the relationship between osmotic equilibrium and ionic composition of marine animals.

5ai. What do you understand by the term excretory organ?

ii Outline the functions of the mammalian kidney.

b. Briefly describe the urinary disorders you know

- 6ai. List the factors affecting stomatal opening and closing.
- ii. Explain the mechanism of guttation.
- b. What is the significance of the following:
- (i) diffusion (ii) osmosis