



NATIONAL OPEN UNIVERSITY OF NIGERIA
Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja
Faculty of Sciences
Department of Pure and Applied Sciences
JANUARY, 2021 EXAMINATION.

COURSE CODE: BIO306

COURSE TITLE: GENERAL PHYSIOLOGY II

CREDIT: 2 units

TIME ALLOWED: 2 Hours

INSTRUCTION: Answer question ONE (1) and any other THREE (3) questions

- 1 a. Mention the sense organ for touch **1 Mark**
b. Define the following terms: (i) Imbibition (ii) Osmoregulation **2 Marks**
c. Mention the main regions of the mammalian brain **6 Marks**
d. Draw and label a diagram 10-12 cm long of a motor neuron and label fully **7 Marks**
e. List six (6) blood cells **3 Marks**
f. The Iroko plant (*Milicia excelsa*) can grow up to 50 m; however, water still manages to reach the topmost leaves. Explain how this plant achieves this feat over the ages. **6 Marks**
- 2 a. State four factors that affect the opening and closing of stomata **6 Marks**
b. Write concisely on the Nephron **5 Marks**
c. Why do human beings carry out osmoregulation? **3 Marks**
d. Mention the sense of sight. **1 Mark**
- 3 a. Mention six (6) life activities of birds in which blood is important **3 Marks**
b. What are the chemical messengers at social level? **6 Marks**
c. Name the layers of the eyeball **3 Marks**
d. Highlight the functions of the cerebral cortex **3 Marks**
- 4 a. State the functions of trophic hormones **5 Marks**
b. Outline the nature and functions of hormone **6 Marks**
c. Briefly enumerate the major components of the circulatory system **3 Marks**
d. What type of lens is recommended for someone suffering from hypermetropia? **1 Mark**
- 5 a. Describe the components of internal ear **7 Marks**
b. State the mechanism of hearing **5 Marks**
c. What do you understand by diffusion pressure? **3 Marks**