



NATIONAL OPEN UNIVERSITY OF NIGERIA
Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja
Faculty of Sciences
Department of Pure and Applied Sciences
2023 2 EXAMINATIONS

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 eight nitrogen waste products **(4marks)**
(b) Succinctly mention the effect of autonomic Nervous system of the Following:
(i) Bronchioles (ii) Sweat **4marks**
(c) Write a comprehensive note on hormones **(7marks)**
(d) Terrestrial Invertebrates can respond to osmotic condition. Discuss **(10marks)**
- 2(a) Explain the movement of substances from region of higher concentration to that of lower concentration. **(5marks)**
(b) Discuss the regulation of blood glucose to maintain a healthy life. **(10marks)**
- 3(a) Mention any six (6) types of reflexes. **6marks**
(b) Briefly, explain what happens as the impulse reach the terminal end of the axon over the surface of the synapse process **(9marks)**
- 4(a) Outline the three (3) eye defects you know **(3marks)**
(b) Describe and explain of the following parts of the eye:
(i) Retina (ii) Yellow spot (iii) Blind spot (iv) Lens **(12marks)**
- 5(a) List the factors that affect inhibition **(5marks)**
(b) Give a detailed description of the thyroid and what happens when they are over or under secreted **(10marks)**

QUESTION 3

Edegbo Company Ltd produces a component for its use. The following are the costs per unit of the production of 40,000 units.

	₦
Materials	15.00
Labour	30.00
Variable overheads	20.00
Fixed overheads	<u>45.00</u>
Total Cost	<u>₦110.00</u>

Aduga Company Ltd agreed to sell the component to Edegbo Company Ltd - 40,000 units at ₦55 per unit. If the component has to be bought in, then the space for manufacturing the component can be given out on rent to Ojoduwa Company Limited for ₦70,000. Moreover, the ₦8.00 fixed costs attributable to Aduga Company Ltd will be jettisoned.

Required:

- i) Advise Edegbo Company Ltd on what to do. (9 Marks)
 - ii) What are the other factors that can lead to the rejection or acceptance of the offer? (6 Marks)
- (Total = 15 Marks)

QUESTION 4

Define rolling budget and state its advantages and disadvantages. Differentiate between forecast and budget. (15 marks)

QUESTION 5

Differentiate between marginal costing approach and absorption costing approach. (15 marks)

- 3 (a) Differentiate between the 'technical proposal' and the 'technical brief' **3marks**
(b) What is the purpose of 'Discussion' in research? **3marks**
(c) What is the difference between 'References' and 'Bibliography'? **3marks**
(d) Write short note on 'Methods of Data Collection' **3marks**
- 4 (a) Describe the major components of bibliographic and reference in research **4marks**
(b) Before writing a technical report, what are the three questions that will come into your mind? **3marks**
(c) Of what importance is a graph in scientific writing? **2marks**
(d) Your technical report must contain a set of recommendations which clearly set out to achieve what and what? **3marks**
- 5 (a) Outlined three aspects of the challenges facing African Scientists willing to publish in scientific journals **1mark**
(b) Briefly discuss the challenges facing African scientists willing to publish in scientific journals. **6marks**
(c) Differentiate between 'Endnote' and 'Footnote' **3marks**
(d) Distinguish between clarity and brevity in writing the Findings of a technical report or scientific paper. **2marks**
- 6 (a) Describe what constitutes the content of the Results/Findings section of a technical report or scientific paper. **2marks**
(b) Rewrite the following references in a correct formal reference list:
i) *Scientific Writing for Graduate Students*. Woodford, R.P. (Ed.). (1968). New York: The Rockefeller University Press. (A Council of Biology Editors Manual).
ii) "Exploring the potential of digitized information for Africa's development by broadening UNESCO's agenda on INFOethics." Aiyepku, W.O. (1998). Nigeria's position paper prepared for delivery at the *INFOethics '98* conference, Monte Carlo, Monaco, 01403 Oct., 1998. 12p. **5marks**
(c) In rhetorical writing of a technical document reports, what are the designing principles? **3marks**
(d) Explain in clear terms method(s) of scientific investigation in technical report **2marks**