



UNIVERSITY EXAMINATIONS

**FIRST YEAR EXAMINATION FOR THE AWARD OF THE CERTIFICATE IN
ANIMAL SCIENCE AND TECHNOLOGY
SECOND SEMESTER 2024/2025
[SEPTEMBER – DECEMBER, 2024]**

BIOC 00113: BIOCHEMISTRY

STREAM: Y1 S2

TIME: 2 HOURS

DAY: TUESDAY, 3:00 - 5:00 P.M.

DATE: 17/12/2024

INSTRUCTIONS:

- 1. Do not write anything on this question paper.**
- 2. Answer question ONE in section A (Compulsory) and any other TWO questions from section B.**

SECTION A [COMPULSORY] [40 MARKS]

QUESTION 1

- (a) Give three classes of carbohydrates, in each give two examples. [4marks]
- (b) List any two examples of functional disaccharides. [2marks]
- (c) What are lipids ? give four examples. [3marks]

QUESTION 2

Explain the following terms;

- (a) Phospholipids [2marks]
- (b) Triglyceride [2marks]
- (c) Waxes [2marks]
- (d) Amino acids [2marks]
- (e) Nucleic acids [2marks]
- Give four examples of amino acids. [2marks]

QUESTION 3

- (a) What is RNA? [1mark]
- (b) List three different types of RNA and their functions. [3 marks]
- (c)What are enzymes ? [1mark]
- (d)Explain what you understand by biotechnology and its uses. [3 marks]
- (e)Give four examples of milk products you know. [2 marks]

QUESTION 5

- (a) Explain the classification of enzymes. [5 marks]
- (b) Give the practical uses of enzymes. [5 marks]

SECTION B [30 MARKS]

QUESTION 6

- (a)Explain the two functional classes of disaccharides. [4 marks]
- (b)Briefly explain three structural polysaccharides. [6 marks]

QUESTION 7

- (a)Differentiate between asexual and sexual reproduction, in each give one example. [5 marks]
- (b)Explain two methods of asexual reproduction. [5 marks]

QUESTION 8

- (a)What is glycolysis? [2 marks]
- (b)Highlight the steps in glycolysis. [5 marks]
- (c)List six essential amino acids. [3 marks]

QUESTION 10

Describe mendel's law with an illustration. [10 marks]