



TECHNICAL UNIVERSITY OF MOMBASA

---

FACULTY OF APPLIED AND HEALTH SCIENCES  
DEPARTMENT OF PURE AND APPLIED SCIENCES

UNIVERSITY EXAMINATION FOR:  
DIPLOMA IN ANALYTICAL CHEMISTRY  
(DAC YEAR 2/ SEMESTER 1)  
ABT2103 INTRODUCTION TO BIOCHEMISTRY  
SUPPLEMENTARY AND SPECIAL EXAMINATION  
SERIES: DECEMBER 2024

TIME: 2 HOURS

DATE: Pick Date **December** 2024

**Instructions to Candidates**

You should have the following for this examination

*-Answer Booklet, examination pass and student ID*

This paper consists of FIVE Question(s). Attempt question ONE (Compulsory) and any other TWO questions.

**Do not write on the question paper.**

**Mobile phones are NOT allowed in the examination room**

**SECTION A (Answer all the Questions)**

**(30 Marks)**

**QUESTION ONE**

- a) Define the following
  - I. **Metabolism** (2 marks)
  - II. **Substrate.** (2 marks)
- b) Give the building blocks of proteins. (2 marks)
- c) Briefly describe the functions of lipids. (4 marks)
- d) Briefly explain the primary function of carbohydrates. (4 marks)
- e) Outline the four major types of biomolecules (4 marks)
- f) Outline the functions of proteins (4 marks)
- g) Outline the two main types of nucleic acids. (4 marks)
- h) Briefly describe the composition of carbohydrates (4 marks)

**SECTION B: Choose Any TWO Questions (30 Marks)**

**QUESTION 2**

- a) Outline the formation and types of Disaccharides (7 marks)
- b) Briefly describe the functions of Disaccharides (8 marks)

**QUESTION 3**

- 1. Describe the structure and function of the following
  - I. Enzymatic Proteins (7 marks)
  - II. Regulatory Proteins (8 marks)

**QUESTION 4**

- a) Briefly describe the structure and functions Fatty Acids (7 marks)
- b) Briefly describe the structure and functions Triglycerides (8 marks)

**QUESTION 5**

- a) Outline the types of RNA (Ribonucleic Acid) (5 marks)
- b) Discuss the structure and functions of ANY THREE RNA (Ribonucleic Acid) Types. (10 marks)