

UNIVERSITY EXAMINATIONS

FIRST SEMESTER 2025/2026 ACADEMIC YEAR

**FOURTH YEAR EXAMINATION FOR THE DEGREE OF
BACHELOR OF SCIENCE (GENERAL)**

BOTA 412: PLANT BIOCHEMISTRY

STREAM: R

TIME: 2 HRS

DAY: MONDAY [14.30 – 16.30 P.M]

DATE: 02/02/2026

THIS QUESTION PAPER CONSISTS OF TWO (2) PAGES

PLEASE DO NOT OPEN UNTIL THE INVIGILATOR SAYS SO.

Instructions

Answer ALL questions in section A and any TWO questions in section B

SECTION A (40 marks)**QUESTION ONE**

State the functions of **two** disaccharides found in plants (5 Marks)

QUESTION TWO

Illustrate the formation of the peptide bond (5 Marks)

QUESTION THREE

State the types of membrane lipids found in plants (5 Marks)

QUESTION FOUR

Outline the differences between DNA and RNA (5 Marks)

QUESTION FIVE

Explain how transient change in the ion permeability of the plasma membrane is used in plant defence (6 Marks)

QUESTION SIX

Identify **five** alkaloids found in plants (5 Marks)

QUESTION SEVEN

Outline the functions of cutin and suberin (5 Marks)

QUESTION EIGHT

Identify **four** proteins found in plants (4 Marks)

SECTION B (30 MARKS)**QUESTION NINE**

Giving relevant examples, discuss the function of terpenes in plants (15 Marks)

QUESTION TEN

Write an essay about enzymes and coenzymes (15 Marks)

QUESTION ELEVEN

Outline the functions and structural properties polysaccharides found in plants (15 Marks)