

UNIVERSITY EXAMINATIONS

FIRST SEMESTER 2025/2026 ACADEMIC YEAR

**THIRD YEAR EXAMINATION FOR THE DEGREES OF
BACHELOR OF EDUCATION (SCIENCE) AND BACHELOR
OF SCIENCE (GENERAL)**

BOTA 312: PLANT GROWTH AND DEVELOPMENT

STREAM: R

TIME: 2 HRS

DAY: WEDNESDAY [14.30 – 16.30 P.M]

DATE: 04/02/2026

THIS QUESTION PAPER CONSISTS OF THREE (3) PAGES

PLEASE DO NOT OPEN UNTIL THE INVIGILATOR SAYS SO.

SECTION A: ANSWER ALL QUESTIONS (40 MARKS)

QUESTION ONE

Explain how the photosynthetic function that occurs in plants and other organisms changed the earth

(4 Marks)

QUESTION TWO

Briefly explain what angiosperms are

(6 Marks)

QUESTION THREE

Describe the process of double fertilization in the Angiosperms

(6 Marks)

QUESTION FOUR

Identify the zones of development within the shoot apex

(6 Marks)

QUESTION FIVE

Distinguish between true juvenility and pseudo-jjuvenility in plants

(6 Marks)

QUESTION SIX

Explain:

a) Senescence in plants

(1 Mark)

b) The features of senescence in plants

(5 Marks)

QUESTION SEVEN

Describe the first three stages in the process of tuber formation

(6 Marks)

SECTION B: ANSWER ANY TWO QUESTIONS (30 MARKS)

QUESTION EIGHT

Discuss:

- a) The processes of differentiation and dedifferentiation of growth and development
in plants (10 Marks)
- b) Any **five** abnormal plant growth types (5 Marks)

QUESTION NINE

Discuss:

- a) How some cultivation techniques might be helpful in reduction (overcoming) of the Juvenile
period in plants (10 Marks)
- b) Structure and function of the root cap (5 Marks)

QUESTION TEN

Outline the key stages and events in plant embryogenesis (15 Marks)