

UNIVERSITY EXAMINATIONS

1ST SEMESTER 2022/2023 ACADEMIC YEAR

FOURTH YEAR EXAMINATION FOR THE DEGREES
OF BACHELOR OF EDUCATION (SCIENCE),
BACHELOR OF SCIENCE (GENERAL)

BOTA 411: PLANT PATHOLOGY

STREAM: R

TIME: 2 HRS

DAY: WED [11.30AM – 13.30HRS] DATE: 21/12/2022

THIS QUESTION PAPER CONSISTS OF THREE (3) PAGES

PLEASE DO NOT OPEN UNTIL THE INVIGILATOR SAYS SO.

INSTRUCTIONS: Answer ALL Questions in Section A and Any TWO from Section B.

SECTION A :(40 marks).

QUESTION ONE

- (a). Define the term phytopathology (2 Marks)
- (b). Distinguish the following pairs of terms (6 Marks)
- i. Pathogenicity and Pathogenesis
 - ii. Symptom and Syndrome
 - iii. Primary inoculum and Secondary inoculum

QUESTION TWO

- Outline the most important contribution of the following in plant pathology (2 Marks)
- i. P.A Millardet
 - ii. J.G. Horsfall

QUESTION THREE

- (a) Briefly describe the methods used in disease forecasting (5 Marks)
- (b) How does plant disease forecasting help to control disease (3 Marks)

QUESTION FOUR

- (a) Outline the factors that favor development of plant diseases epidemics. (2 Marks)
- (b) State host factors that affect the development of disease epidemics (3Marks)

QUESTION FIVE

- (a). How does nutrition affect the disease incidence? (3 Marks)
- (b). Name any two plant pathogens which require high relative humidity throughout their development (2 Marks)

QUESTION SIX

- (a). Briefly explain the characteristics of bio-control agents. (5 Marks)
- (b). Define fungicides resistance? State the strategies used to overcome it (3 Marks)

QUESTION SEVEN

- Write short notes on how nematodes affect plant health. (4 Marks)

SECTION B: 30 MARKS

QUESTION EIGHT

Discuss the factors affecting crop yields, giving appropriate examples (15 Marks)

QUESTION NINE

With suitable examples, discuss the different morphological defense mechanisms in plants to diseases (15 Marks)

QUESTION TEN

Discuss black stem rust (*Puccinia graminis fsp. tritici*) under the following sub headings: Symptom, disease development and control. (15 Marks)

