



UNIVERSITY EXAMINATIONS

SECOND SEMESTER 2023/2024 ACADEMIC YEAR

**SECOND YEAR EXAMINATION FOR THE DEGREE OF
BACHELOR OF SCIENCE (AGED)**

BOTA 223: INTRODUCTION TO PLANT PATHOLOGY

STREAM: AGED

TIME: 2 HRS

DAY: THURSDAY [11.30A.M – 1.30P.M]

DATE: 11/04/2024

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 Two from Section B.

SECTION A : (40 marks). - Answer ALL questions in this section

QUESTION ONE

Give brief definitions of each of the following terms;

(4 Marks)

- a. Inoculation
- b. Virulence
- c. Hyperplasia
- d. Pathogenesis

QUESTION TWO

Briefly outline the “Host-parasite relationship” between plant parasitic nematodes and their hosts.

(6 Marks)

QUESTION THREE

State any **four** sexual and any **four** asexual spores produced by plant pathogenic fungi. **(4 Marks)**

QUESTION FOUR

Briefly describe the various methods through which pathogens penetrate plant surfaces.

(5 Marks)

QUESTION FIVE

Explain how plant diseases cause financial losses.

(5 Marks)

QUESTION SIX

Define the term “disease triangle”. Explain how named component of the disease triangle may influence the amount of the disease.

(10 Marks)

QUESTION SEVEN

With the aid of a well-labeled sketch diagram, describe the types of flagellation found in the following phytopathogenic prokaryotes.

(6 Marks)

- a. *Erwinia carotovora*
- b. *Pseudomonas syringae* p.v. *lisi*
- c. *Xanthomonas campestris* p.v. *phaseoli*
- d. *Agrobacterium tumefaciens*



SECTION B: 30 MARKS

QUESTION EIGHT

Describe briefly the nature of plant viruses and the methods of their transmission. **(15 Marks)**

QUESTION NINE

Discuss sequentially the stages of disease development in plants **(15 Marks)**

QUESTION TEN

Explain the principal methods applicable for the control of phytopathogens. **(15 Marks)**

