

UNIVERSITY OF ESWATINI
MAIN EXAMINATION PAPER: OCTOBER 2021

TITLE OF PAPER: PLANT PATHOLOGY

COURSE CODE: BIO452

TIME ALLOWED: THREE HOURS

INSTRUCTIONS:

1. ANSWER 4(FOUR) QUESTIONS
2. EACH QUESTION CARRIES TWENTY FIVE (25) MARKS
3. ILLUSTRATE YOUR ANSWERS WITH LARGE AND
CLEARLY LABELLED DIAGRAMS WHERE
APPROPRIATE

SPECIAL REQUIREMENTS: NONE

THIS PAPER IS NOT TO BE OPENED UNTIL PERMISSION HAS BEEN GRANTED BY
THE INVIGILATORS.

[PLEASE TURN OVER]

Question 1

- a) Suppose that there is a sudden prevalence of an unknown plant disease in Eswatini, explain how you would go about identifying the disease. (10 marks)
- b) Explain what you think the cycle of the disease in (a) above would entail. (10 marks)
- c) What is the importance of knowing a disease cycle in plant pathology? (5 marks)

[Total Marks=25]

Question 2

- a) List the most important genera of plant pathogenic bacteria. (5 marks)
- b) Write an essay on the mechanisms behind bacterial pathogenicity to plants (20marks)

[Total Marks=25]

Question 3

Describe any plant disease of your choice in terms of the following:

- i. Biology of the causal agent (7 marks)
- ii. Disease cycle (8 marks)
- iii. Epidemiology (10 marks)

[Total Marks=25]

Question 4

Write short notes on the following:

- i. Polycyclic pathogens (7marks)
- ii. Monocyclic pathogens (6 marks)
- iii. Polyetic pathogens (6 marks)
- iv. Vertical resistance (6 marks)

[Total Marks=25]

[PLEASE TURN OVER]

Question 5

- a) Outline the suggested schedule of growing maize in Swaziland. (10 marks)
- b) Indicate the disease control strategies in this schedule and explain the disease control mechanism in each case. (15 marks)

[Total Marks=25]

Question 6

Write a brief summary of the symptoms of plant diseases. (25 marks)

END OF EXAMINATION PAPER