UNIVERSITY OF ESWATINI

FINAL EXAMINATION PAPER: MAY 2020

TITLE OF PAPER: PLANT PATHOLOGY

COURSE CODE: BIO452

TIME ALLOWED: THREE HOURS

INSTRUCTIONS:
1. THIS PAPER IS DIVIDED INTO 2 (TWO) SECTIONS
2. ANSWER 2(TWO) QUESTIONS FROM EACH SECTION IN A SEPARATE BOOKLET
3. EACH QUESTION CARRIES TWENTY FIVE (25) MARKS
4. 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]

SECTION A

Answer **2 (two questions)** from this section

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. (15 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]

SECTION B

Question 4

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)

Question 5

a) Define plant necrotic symptoms and their classification. (5 marks)

b) Name and describe ten (10) necrotic symptoms representing both classes. (20 marks)

Question 6

a) Draw the life cycle of a downy mildew of your choice (13 marks)

b) What is the importance of knowing a life cycle in plant pathology? (13 marks)

END OF EXAM PAPER