



SUPPLEMENTARY 2007/2008

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UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION

**PROGRAMME: BACHELOR OF SCIENCE IN AGRICULTURAL
EDUCATION YEAR 3 (NEW), BACHELOR OF SCIENCE
IN AGRONOMY YEAR 3 (NEW) AND BACHELOR OF
HORTICULTURE YEAR 3 (NEW)**

COURSE CODE: CP 303

TITLE OF PAPER: PLANT PATHOLOGY & DISEASE MANAGEMENT

TIME ALLOWED: TWO (2) HOURS

**INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS
BEGIN EACH QUESTION ON A NEW SHEET**

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THE CHIEF INVIGILATOR**

QUESTION 1

Discuss a disease of your choice under the following topics:

- a. Name of the disease (2 marks)
- b. Causal agent (2 marks)
- c. Host range (3 marks)
- d. Symptoms and/or signs (8 marks)
- e. Possible control measures (10 marks)

[25 marks]

QUESTION 2

Name the causal agents of the following diseases:

- a) Bacterial wilt on tomatoes (4 marks)
- b) Halo blight on beans (5 marks)
- c) Angular leaf spot on beans (4 marks)
- d) Grey leaf spot on maize (4 marks)
- e) Early blight on potatoes (4 marks)
- f) White rust on mustard leaf (3 marks)

[25 Mark]

QUESTION 3

Using the disease caused by *Puccinia sorghi* on maize as a model, describe the five different spore forms of a heteroecious rust. **[25 marks]**

QUESTION 4

Describe symptoms of the following diseases:

- a) Bacterial canker on citrus (5 marks)
- b) Blossom-end rot on tomatoes (4 marks)
- c) Powdery mildew on mustard leaf (4 marks)
- d) Smut on sugarcane (6 marks)
- e) Late blight on tomatoes (6 marks)

[25 marks]

QUESTION 5

A Farmer wants to spray his crop of tomatoes, in a field of 0.8 hectares, against the disease late blight (*Phytophthora infestans*). He has been advised to use a mixture of the fungicides Metalaxyl and mancozeb, at a rate of 190g/ha and 520g/ha, respectively. The farmer is aware that before spraying, one has to calibrate the sprayer to be used.

- a. Describe what the farmer has to do step-by-step in order to determine the amount of water (s)he needs to carry out the exercise. (15 marks)
- b. Using the information gathered when calibrating the sprayer (above), calculate the quantities of the two fungicides the farmer will use to spray his/her crop.

(10 marks)

[25 marks]