



2ND SEMESTER 2018/2019

PAGE 1 OF 3

UNIVERSITY OF ESWATINI

RE-SIT/SUPPLEMENTARY EXAMINATION

PROGRAMME: BACHELOR OF SCIENCE IN AGRONOMY LEVEL 2, BACHELOR OF SCIENCE IN AGRONOMY YEAR 3, BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATIONS LEVEL 2, BACHELOR OF SCIENCE IN AGRICULTURAL EXTENSION LEVEL 2, BACHELOR OF SCIENCE IN HORTICULTURE LEVEL 2, AND BACHELOR OF SCIENCE IN HORTICULTURE YEAR 3

COURSE CODE: CPR206/ CP 304

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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COURSE CODE: CPR206/CP 304 (R/S)

PAGE 2 OF 3

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

In genetics of plant disease, discuss the different specialised mechanisms of variability in:

- | | | |
|----|-----------|-------------------|
| a) | Fungi | (12 Marks) |
| b) | Bacteria. | (13 Marks) |
| | | [25 Marks] |

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

A Farmer wants to spray his crop of tomatoes, in a field of 1.2 hectares, against the disease late blight. He has been advised to use a mixture of the fungicides Metalaxyl and Mancozeb, at a rate of 220g/ha and 340g/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] |

QUESTION 5

Discuss the induced structural defence systems used by plants against pathogens. (25 Marks)