2ND SEMESTER 2014/2015 (S)

UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION PAPER

PROGRAMME: BACHELOR OF SCIENCE IN AGRICULTURAL
EDUCATION YEAR 3,
BACHELOR OF SCIENCE IN AGRONOMY YEAR 3, AND,
BACHELOR OF SCIENCE IN HORTICULTURE YEAR 3.

COURSE CODE: CP 304

TITLE OF PAPER: PLANT PATHOLOGY & DISEASE MANAGEMENT

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS

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QUESTION 1

a.   Describe the disease cycle of *Puccinia sorghi* on maize.   (20 marks)

b.   Define the gene-for-gene concept.   —   (5 marks)

[25 marks]

QUESTION 2

a.   How are bacterial diseases disseminated.   (12 marks)

b.   List Koch's postulates and their exceptions.   (7 marks)

C.   Explain how the different genera of the order Erysiphales are delimited.

(6 marks)

[25 marks]

QUESTION 3

Using a disease of your choice (not found on maize) describe its disease profile.

[25 marks]

QUESTION 4

From a variety with 3 resistant genes (R_1 R_4 and R_6), work out the possible gene
combinations and their reaction to a pathogen with corresponding genes using the gene-for-
gene concept.   **[25 marks]**

QUESTION 5

Describe properties of any five phytopathogenic bacteria.

[25 marks]