



1st SEMESTER 2011/2012

PAGE 1 OF 2

UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

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

**DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN GRANTED BY
THE CHIEF INVIGILATOR**

QUESTION 1

Distinguish the following:

- a) A fungal and a bacterial leafspot (6 marks)
 - b) Early and late blight of tomato (6 marks)
 - c) An autoecious and a heteroecious rust (6 marks)
 - d) Symptoms of rust on beans and halo blight also on beans (7 marks)
- [25 marks]**

QUESTION 2

Discuss a fungal disease that attacks maize in Swaziland under the following topics:

- (i) Name of disease (2 marks)
 - (ii) Causal agent (3 marks)
 - (iii) epidemiology (3 marks)
 - (iv) Symptoms (7 marks)
 - (v) how the pathogen survives/overwinters (5 marks)
 - (vi) control/management measures (5 marks)
- [25 marks]**

QUESTION 3

Describe properties of the following genera of phytopathogenic bacteria and give one example in each case:

- (a) Erwinia (9 marks)
 - (b) Xanthomas (9 marks)
 - (c) Streptomyces (7 marks)
- [25 marks]**

QUESTION 4

- (a) Outline the differences between biotrophs and necrotrophs. (10 marks)
 - (b) Discuss the different types of viruses based on the transmission by aphids. (15 marks)
- [25 marks]**

QUESTION 5

- (a) Describe symptoms of sugarcane smut on sugarcane. (10 marks)
 - (b) Describe how sugarcane smut is monitored and controlled in Swaziland. (15 marks)
- [25 marks]**