



**2<sup>nd</sup> SEMESTER FINAL EXAMINATION 2017/2018**

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**UNIVERSITY OF SWAZILAND**

**FINAL EXAMINATION PAPER**

**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 EDUCATION YEAR  
3, 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 AND DISEASE MANAGEMENT**

**TIME ALLOWED: TWO (2) HOURS**

**INSTRUCTIONS: ANSWER ANY FOUR 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**

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

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

**QUESTION 3**

- (a) Outline the differences between biotrophs and necrotrophs. (10 marks)
- (b) Describe symptoms of sugarcane smut on sugarcane. (10 marks)
- (c) Describe the symptoms of bacterial wilt caused by *Ralstonia solanecearum* on a tomato plant. (5 marks)

**[25 Marks]**

**QUESTION 4**

Discuss the different types of plant viruses based on their transmission by aphids.

**[25 Marks]**

**QUESTION 5**

Discuss the Disease triangle and the significance of its different components in disease development.

**[25 Marks]**