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**UNIVERSITY OF SWAZILAND
SUPPLEMENTARY EXAMINATION**

PROGRAMMES: 1. B.SC IN AGRICULTURAL EDUCATION III
2. B.SC IN AGRONOMY III
3. B.SC IN HORTICULTURE III

COURSE CODE: CP304

TITLE OF PAPER: PLANT PATHOLOGY & DISEASE MANAGEMENT
TIME ALLOWED: TWO (2) HOURS

- INSTRUCTIONS:**
1. ANSWER QUESTION 1 (COMPULSORY) AND ANY OTHER 3 QUESTIONS
 2. ANSWER FOUR (4) QUESTIONS IN TOTAL
 3. EACH QUESTION CARRIES TWENTY FIVE (25) MARKS.
 4. ILLUSTRATE YOUR ANSWERS WITH LARGE AND CLEARLY LABELED DIAGRAMS WHERE APPROPRIATE.

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THE CHIEF INVIGILATORS**

QUESTION 1 (COMPULSORY)

Using appropriate subtitles, stipulate and explain the steps a pathologist would follow in an attempt to diagnose a disease.

[25 marks]

QUESTION 2

(a) Draw the life cycle of maize rust, showing the nuclear condition of the fungus at each stage. (15 marks)

(b) Name the hosts of this fungus. (2 marks)

(c) Which spores bring about genetic variability in the pathogen? Explain. (3 marks)

(d) Name the spore which brings about disease spread in maize. (1 mark)

(e) Which disease management strategies are essential in maize? (4 marks)

[25 marks]

QUESTION 3

Prepare a table to show the interrelationships between epidemiological approach, disease management tools and the components of disease. Explain how this can be applied in managing a disease of your choice.

[25 marks]

QUESTION 4

Describe how hormones and toxins are used as invasion tools by pathogens.

[25 marks]

QUESTION 5

Discuss

(a) induced mechanism of resistance in plants, (12 marks)

(b) pre-formed mechanism of resistance in plants. (13 marks)

[25 marks]

QUESTION 6

(a) Describe the infection process up to penetration of host tissues. (15 marks)

(b) Explain pathogen invasion using growth regulators. (10 marks)

[25 marks]

END OF EXAMINATION PAPER