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APH 827



**MASINDE MULIRO UNIVERSITY OF SCIENCE AND
TECHNOLOGY (MMUST)**

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2022 /2023 ACADEMIC YEAR**

FIRST YEAR SECOND SEMESTER MAIN EXAM

FOR THE DEGREE

OF

MASTER OF SCIENCE IN PLANT HEALTH

COURSE CODE: APH 827

**COURSE TITLE: PLANT DISEASE EPIDEMIOLOGY AND
MANAGEMENT**

DATE: 21.04.2023

TIME: 2-5 PM

INSTRUCTION TO CANDIDATES

Answer all questions in section A and any other two in section B

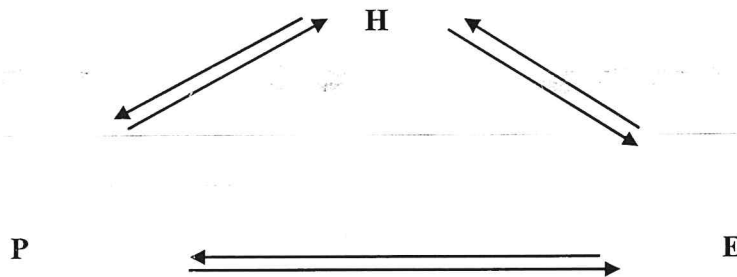
Time: 2hrs

MMUST observes ZERO tolerance to examination cheating

SECTION A ANSWER ALL QUESTIONS (40 MARKS)

1. Define the term Epiphytology as related to Edpidemiology, name three factors controlling the science of epidemiology (10 marks)

2. Name parts of the Disease triangle below (5 stages) (5 marks)



3. Describe at least five farm activities useful in reduction of disease epidemic intensity (5 marks)

4. Describe activities involved in the push and pull programme of controlling striga weed and stalk borer in maize crop (10 marks)

5. Define Chemical control, mention some of dangers and benefits of pest control using this methodology, suggest some measures using biocontrol (10 marks)

SECTION B: ANSWER TWO QUESTIONS (60 MARKS)

6. The disease outbreak of Potato blight in Ireland in 1945-1946 was a world record famine that cause havoc. List some of the factors that could have contributed to it, describe warning systems that could have been used to prevent it and major control measures that should have been used

(30 marks)

7. Discuss development and use of Expert systems in plant Pathology

(30 marks)

8. What Computer Simulations of epidemics do you know? Describe three best suited in the control of Downy mildew disease of grapes.

(30 marks)

9. Discuss some factors that contributed to the epiphytotic that occurred during, the disease outbreak of the Helminthosporium, southern leaf blight of corn in USA.

(30 marks)