



MACHAKOS UNIVERSITY

University Examinations for 2021/2022 Academic Year

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

THIRD YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE (BIOLOGY)

SBT 205: PHYTOPATHOGENS

DATE:

TIME:

INSTRUCTIONS

Answer Question one (compulsory) from section A and any two questions in Section B. Use clean well labelled diagrams wherever appropriate.

SECTION A (compulsory)

1.
 - a) Define plant pathology and highlight its significance (3 marks)
 - b) Explain the following terms:
 - i. Systemic infection (1.5 marks)
 - ii. Epiphytotic disease (1.5 marks)
 - c) Describe modes of dispersal of infectious plant pathogens in *space* (3 marks)
 - d) Differentiate Seed infection and infestation (3 marks)
 - e)
 - i Explain Host Susceptibility (1 mark)
 - ii Explain the process of pathogen Invasion and colonization. (2 marks)
 - f) Outline the role of enzymes in pathogenesis (3 marks)
 - g) Outline Essential conditions for an Epiphytotic (3 marks)
 - h) Describe the photoperiodism in plants (3 marks)
 - i) Differentiate host – specific and non-host specific toxins (3 marks)
 - j) Outline the physiological effects of auxins in plants (3 marks)

SECTION B: ANSWER ANY OTHER TWO QUESTIONS

2. Discuss the four mechanisms of survival by pathogens (20 marks)

3. a) Describe the factors necessary for successful infection in plants (10 marks)
 b) Highlight the importance of Plant disease epidemiology (10 marks)
4. Give a detailed account of defense mechanism in plants (20 marks)
5. In plant disease management,
 - a) Highlight the essential considerations in plant disease management. (10 marks)
 - b) General principles of plant disease management (10 marks)