

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

SECOND YEAR EXAMINATION FOR THE AWARD DEGREE OF BACHELOR OF SCIENCE IN MICROBIOLOGY AND BIOTECHNOLOGY, BACHELOR OF SCIENCE IN BIOLOGY, BACHELOR OF EDUCATION SCIENCE

BOTA 251: INTRODUCTION TO PLANT PATHOLOGY

STREAMS: BSc BOTA Y2S2

TIME: 2 HOURS

DAY/DATE: TUESDAY 18/4/2023

8.30 A.M. – 10.30 A.M.

INSTRUCTIONS:

- Answer ALL questions in section A and TWO questions in section B
- Do not write on this question paper.

SECTION A: Short Answer Questions (30 MARKS)

- a. List three importance of crop rotation in disease management. (3 marks)
 - b. Give one advantage and one disadvantage of growing tolerant crop variety. (2 marks)
- a. Explain the significance of survival structures in plant pathogen. (1 marks)
 - b. Explain four survival mechanisms in plant parasitic nematodes. (3 marks)
- a. Explain the meaning of hypersensitive reaction as applied in plant pathology. (1 mark)
 - b. Explain four ways in which formation of cork layer contribute in host resistance to diseases. (4 marks)
- a. Outline three ways in which extensive mono-cropping affects disease epidemics. (2 marks)
 - b. List four effects of water in plant disease formation. (3 marks)

5. Describe the process of tumour formation on woody plants infested by *Agrobacterium tumefaciens*. (5 marks)
6. List five groups of plant nematodes giving an example in each case. (1 mark)

SECTION B: ANSWER ANY TWO QUESTIONS IN THIS SECTION (40 MARKS)

7. Discuss the methods of disease diagnosis in plants. (20 marks)
 8. Discuss the Bacteria wilt disease of Solanum under the following;
 - a. The biology of bacterial wilt disease (10 marks)
 - b. Management of bacterial wilt disease (10 marks)
 9. a. Discuss the role of temperature in disease predisposition. (10 marks)
b. Discuss pathogen factors responsible for disease outbreak. (10 marks)
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