

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE

BOTA 251: INTRODUCTION TO PLANT PATHOLOGY

STREAMS: BSC

TIME: 2 HOURS

DAY/DATE: MONDAY 12/07/2021

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 the question paper.**
- **Answer each question on a fresh page.**

SECTION A: SHORT ANSWER QUESTIONS (30 MARKS)

1. Differentiate between the following terms as used in plant pathology.
 - (a) Primary infection and secondary infection (1 marks)
 - (b) Canker and chlorosis (1 mark)
 - (c) Infection and invasion (1 mark)
 - (d) Non-host resistance and race specific resistance (1 mark)
 - (e) Protectant and systematic fungicides (1 mark)
2.
 - (a) Name the pathogen responsible for fungal wilt disease in Solanaceous plants. (1 mark)
 - (b) Describe four ways by which the pathogen induce wilt in plants. (2 marks)
 - (c) List four symptoms associated with fungal wilt disease. (2 marks)
3.
 - (a) What is the risk associated with continued use of disease tolerant crop varieties in the disease management? (2 marks)

- (b) List three advantages of using resistance-based management of plant diseases. (3 marks)
4. (a) Describe three chemical weapons used by plant pathogen to cause infection, giving an example in each case. (3 marks)
- (b) Highlight two methods used by bacteria plant pathogen to penetrate their hosts. (2 marks)
5. Describe the process of isolating plant parasitic nematodes from a soil sample. (5 marks)
6. Describe mode of parasitism in parasitic higher plants. (5 marks)

SECTION B: ESSAY QUESTIONS (40 MARKS)

7. Write an essay on disease diagnosis methods. (20 marks)
8. (a) Describe the survival strategies of plant parasitic fungi. (10 marks)
- (b) Discuss the dissemination of plant pathogens. (10 marks)
9. Describe the life cycle of the lesion nematode *pratylenchus* ssp. (20 marks)
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