

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

**FOURTH YEAR EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR
OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION AND
BACHELOR OF EDUCATION SCIENCE**

BOTA 453: PLANT PATHOLOGY

STREAMS: BSC AGED, SCI

TIME: 2 HOURS

DAY/DATE: TUESDAY 30/03/2021

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. (a) Explain the roles of the following structures in plant host infection. [2 marks]
 - (i) Appressorium
 - (ii) Hydathodes
 - (iii) Cutinase enzyme
 - (iv) Vectors
- (b) Illustrate active host penetration by fungal pathogen. [3 marks]
2. (a) Define necrotroph and biotroph pathogens giving an appropriate example in each case. [2 marks]
- (b) Outline three roles of human in diseases formation. [3 marks]
3. (a) Giving an example in each case list three tools utilized by the pathogen in disease formation. [3 marks]
- (b) Fungi are considered serious pathogens than the others outline four points in support of this statement. [2 marks]

4. (a) List two reasons why is it difficult to diagnose plant parasitic nematode in an infected field. [2 marks]
(b) List three reasons why it is important to do routine survey/monitoring of plant pathogen. [3 marks]
5. Suggest five ways by which the current climate change trend is likely to affect plant disease formation. [5 marks]
6. Describe the process of extracting bacterial pathogen from a diseased host material. [5 marks]

SECTION B: ESSAY QUESTIONS (40 MARKS)

7. Discuss the disease complexes between plant parasitic nematodes and other disease causing agents. [20 marks]
 8. Discuss general management of plant diseases. [20 marks]
 9. Discuss methods of plant disease diagnosis. [20 marks]
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