

CHUKA



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**EXAMINATION FOR THE AWARD OF DEGREE OF
BACHELOR OF SCIENCE IN BIOLOGY, BACHELOR OF SCIENCE IN CHEMISTRY,
BACHELOR OF SCIENCE IN MATHEMATICS AND BACHELOR OF SCIENCE**

BOTA 453: PLANT PATHOLOGY

STREAMS: BSC (BIO, CHEM, MATH) Y2S1

TIME: 2 HOURS

DAY/DATE: MONDAY 03/12/2018

11.30 AM – 1.30 PM

INSTRUCTIONS:

- **This paper has two sections A and B**
- **Section A accounts for 30 marks while section B accounts for 40 marks**
- **Section A is compulsory**
- **Answer any two questions in section B**

SECTION A

1. (a) Briefly describe the functions of a healthy plant, for each function give an example of the part involved. [6 marks]
- (b) Outline non-infectious agents of disease. [2 marks]
2. Describe features considered when classifying diseases in plants. [4 marks]
3. Describe the standard operating procedure for identifying an unknown disease. [6 marks]
4. Define the following terms as used in plant pathology.
 - (a) Pathogenicity [2 marks]
 - (b) Plant parasite [2 marks]
 - (c) Biotrops [2 marks]
 - (d) Facultative saprophytes [2 marks]

5. Describe significance of disease as used in plant pathology. [4 marks]

SECTION B

6. (a) Briefly describe disease triangle [5 marks]
(b) Discuss factors affecting development of epidemics in plants. [15 marks]

7. (a) Discuss structural plant defense mechanism against the compounds released by pathogens after an infection. [10 marks]

- (b) Discuss survival mechanisms of fungi. [10 marks]

8. (a) Describe bean common mosaic virus indicating symptoms, disease development and control. [12 marks]

- (b) Describe cultural control methods in disease management. [8 marks]
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