

Roll No. ....

Total Pages : 4

**CMDQ/M-24**

**5636**

**PRINCIPLES OF PLANT PATHOLOGY  
(ELECTIVE)**

Paper–BOT–404(b)

Time Allowed : 3 Hours]

[Maximum Marks : 80

**Note** : Attempt **five** questions in all, selecting **one** question from each Unit. Question No. **1** is compulsory. All questions carry equal marks.

**Compulsory Question**

1. Write short notes on the following :  $8 \times 2 = 16$

- (a) Difference between Toxins and Enzymes.
- (b) Ipomeamarone phytoalexins.
- (c) Defense through phenolic substances.
- (d) What are BLIGHTCAST, EPIVEN, MYCOS, PLASMO ?
- (e) Role of Remote sensing in Disease forecasting.
- (f) Quarantine regulation.
- (g) Two organic sulphur fungicides and their mode of action.

(h) Two host specific toxins and their mode of action.

**UNIT–I**

2. Write short notes on any **two** of the following :  $2 \times 8 = 16$

- (a) Role of pectolytic enzymes in Disease development.
- (b) How plants defend themselves using biochemical defense mechanism.
- (c) Role of Lignolytic enzymes in Disease development.

3. Write short notes on any **two** of the following :  $2 \times 8 = 16$

- (a) How plants defend themselves using morphological defense mechanism.
- (b) Fusaric acid and Lycomarasmin toxin.
- (c) What are PR proteins? What is their role in resistance mechanism?

**UNIT–II**

4. Write short notes on any **two** of the following :  $2 \times 8 = 16$

- (a) Explain any three methods used in Plant disease forecasting with suitable examples.
- (b) How eradication of Pathogen can be done by using cultural methods of Plant disease control
- (c) Inorganic copper fungicides in Plant disease control.

5. Write short notes on any **two** of the following :  $2 \times 8 = 16$

- (a) Explain some important systemic fungicide in Plant disease control.
- (b) Explain some important Antibiotics in plant disease control
- (c) Why Biological control method is better than Chemical control? Explain where it has been successfully used to control Disease with suitable examples.

### UNIT-III

6. Write short notes on any **two** of the following :  $2 \times 8 = 16$

- (a) Hybridoma technology in Plant pathology.
- (b) Explain the use of Callus culture technique of importance of Plant pathology.
- (c) Explain the effect of Temperature and Humidity on the development of a Diseases.

7. Write short notes on any **two** of the following :  $2 \times 8 = 16$

- (a) Explain briefly the importance of Protoplast fusion in Plant pathology.
- (b) With suitable examples explain the effect of herbicides and wind on the development of a Diseases.
- (c) With suitable examples explain the effect of Soil pH and Soil texture on the development of a Diseases.

### UNIT-IV

8. Write short notes on any **two** of the following :  $2 \times 8 = 16$

- (a) How does the pathogen survive in the nature. Explain with suitable examples?
- (b) Dissemination of pathogens by Direct transmission.
- (c) Dissemination of pathogens by Anemochory.

9. Write short notes on any **two** of the following :  $2 \times 8 = 16$

- (a) Explain autonomous transmission of pathogens.
- (b) Mycotoxins produced by Fungi during storage.
- (c) Anthropolochorus with suitable examples.