

# LOYOLA COLLEGE (AUTONOMOUS) CHENNAI – 600 034

**B.Sc. DEGREE EXAMINATION – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY**



FIFTH SEMESTER – **NOVEMBER 2024**



**UPB 5503 – PLANT DISEASES AND MANAGEMENT**

Date: 14-11-2024

Dept. No.

Max. : 100 Marks

Time: 09:00 am-12:00 pm

## SECTION A - K1 (CO1)

**Answer ALL the Questions (10 x 1 = 10)**

**1. Fill in the blanks**

- a) Irish famine was caused by \_\_\_\_\_.
- b) \_\_\_\_\_ produced by the plants is responsible for induced resistance.
- c) \_\_\_\_\_ produced by *Claviceps* is used as a medicine.
- d) Bunchy top in banana is caused by \_\_\_\_\_.
- e) Quarantine is practiced to reduce \_\_\_\_\_.

**2. State whether the following statements are TRUE or FALSE**

- a) Environmental factors play an important role in plant pathogenesis.
- b) Septate conidiospores are produced by *Cercospora*.
- c) *Cuscuta* causes canker disease in citrus trees.
- d) Root knot diseases are caused by mycoplasma.
- e) Alternate host is destroyed to control the multiplication of pathogens.

## SECTION A - K2 (CO1)

**Answer ALL the Questions (10 x 1 = 10)**

**3. Choose the correct answer**

- a) The first defence layer against pathogen is  
1. cutin 2. Hydathodes 3. Suberin 4. tyloses
- b) Disease triangle includes environment, pathogen and  
1. virulent host 2. Susceptible host 3. fertile host 4. All of them.
- c) Pick out the odd one:  
1. Downy mildew 2. Bunchy top 3. Tungro 4. Mosaic.
- d) Which of the following is a viral disease in paddy  
1. Blast 2. Blight 3. Tungro 4. Little leaf
- e) Which of the following is the most common method practiced to reduce disease infestation.  
1. increase plant density 2. water management 3. crop rotation 4. fertilizer spraying

**4. Answer the following, each in about 50 words**

- a) Define Secondary infection.
- b) What are Phytoalexins?
- c) Comment on Club root of cabbage.
- d) Mention any two symptoms of Bunchy top of banana.
- e) What is Plant quarantine?

## SECTION B - K3 (CO2)

**Answer any TWO of the following in 500 words (2 x 10 = 20)**  
Draw diagrams / flowcharts wherever necessary

5.	Identify the enzymes and toxins involved in plant pathogenesis.
6.	Illustrate the disease symptom and control measure of Tikka disease.
7.	Relate any two viral disease that you have studied.
8.	Explain how soil and seed treatment reduces disease incidence in plants.

### **SECTION C – K4 (CO3)**

**Answer any TWO of the following in 500 words (2 x 10 = 20)**  
**Draw diagrams / flowcharts wherever necessary**

9.	Examine the relationship between cross protection and induced resistance in plants.
10.	Categorise the causes and control measures of rice blast.
11.	Survey any 2 bacterial diseases in detail.
12.	Prioritize agricultural practice to avoid disease incidence.

### **SECTION D – K5 (CO4)**

**Answer any ONE of the following in 1000 words (1 x 20 = 20)**  
**Draw diagrams / flowcharts wherever necessary**

13.	Assess the different types of spores produced by <i>Puccinia</i> and illustrate disease cycle.
14.	Evaluate the factors influencing disease incidence and spreading in a large field.

### **SECTION E – K6 (CO5)**

**Answer any ONE of the following in 1000 words (1 x 20 = 20)**  
**Draw diagrams / flowcharts wherever necessary**

15.	Elaborate on the impact of pathogens on the morphology and the physiology of host plants.
16.	Integrate the pest and disease management strategies in a large field.

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