Roll No. ..... Total Pages : 03

756403

May 2026

M.Sc. (Botany) (Fourth Semester)

Plant Pathology (BOP-206 V)

Time : 3 Hours] [*Maximum Marks : 75*

Note : It is compulsory to answer all the questions (1.5 marks each) of Part A in short. Answer any *four* questions from Part B in detail. Different sub-parts of a question are to be attempted adjacent to each other.

Part A

1. (a) What are the major molecules produced by the pathogens to initiate penetration in plant tissues ? 1.5

   (b) Mention key enzymes involved in plant pathogenesis. 1.5

   (c) Enlist indirect pathogens transmission methods. 1.5

   (d) Define the plant quarantine approach adopted in control of pathogens. 1.5

(e) What are the key steps in the disease forecasting ? 1.5

(f) What are the benefits of the integrated pest management ? 1.5

(g) Give name of any *two* major toxins produced by the plant pathogens. 1.5

(h) Draw the life-cycle of the Ergot of the Bajra crop. 1.5

(i) Give examples of the bacterial biopesticides. 1.5

(j) What are the major symptoms of the fungal pathogens ? 1.5

Part B

2. (a) What are the major symptoms and life-cycle of the Panama disease of the banana ? 10

(b) Describe the mechanisms of action for the Bt toxin. 5

3. (a) What is the major detection and management methods of the rice blight ? 5

(b) Write about the detection and control of the citrus canker. 10

4. Give a detailed account on the biological control of the plant diseases. 15

5. (a) What are the general symptoms of the nematode's infection in crop ? 5

(b) Give an account on toppling disease of the Banana crop. 10

6. (a) What are the major approaches to control nematode's infection in crop ? 10

(b) Differentiate between the powdery mildew and Downy mildew diseases. 5

7. Give an account on the plant diseases epidemiology, write about the key steps involved in any diseases tracing. 15

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