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**WT—231—2024**

**FACULTY OF SCIENCE AND TECHNOLOGY**

**M.Sc. (Second Year) (Fourth Semester) EXAMINATION**

**NOVEMBER/DECEMBER, 2024**

**(CBCS/New Pattern)**

**BOTANY**

**Paper XVIII**

**(Plant Pathology-III)**

**(Physiological and Molecular Plant Pathology)**

**(Monday, 16-12-2024)**

**Time : 2.00 p.m. to 5.00 p.m.**

*Time—3 Hours*

*Maximum Marks—75*

*N.B. :— (i) Attempt all questions.*

*(ii) All questions carry equal marks.*

*(iii) Draw neat and well labelled diagrams wherever necessary.*

1. Describe in detail effect of infection on photosynthesis. 15

*Or*

Describe in detail effect of pathogens on transcription and translation.

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2. Describe in detail types, mode of action and role of pectolytic enzymes in pathogenesis. 15

*Or*

Describe in detail chemical nature and mode of action of Victorin and Lycomarasmin.

3. Give an account of genetic variability in bacteria and fungi. 15

*Or*

Describe in detail development of disease free plant by meristem tip culture.

4. Give an account of properties of good cloning vectors. Add a note on Ti-plasmids. 15

*Or*

Describe in detail properties of molecular markers. Add a note on RAPD.

5. Write short notes on (any *three*) : 15

- (a) Effect of pathogens on permeability of cell membrane
- (b) Lipolytic enzymes in pathogenesis
- (c) Gene for Gene relationship
- (d) Southern hybridization.

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