

This question paper contains 2 printed pages]

**NY—22—2023**

**FACULTY OF SCIENCE**

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

**NOVEMBER/DECEMBER, 2023**

**(New/CBCS Pattern)**

**BOTANY**

**Paper-XI**

**(Plant Physiology)**

**(Tuesday, 5-12-2023)**

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

*Time—3 Hours*

*Maximum Marks—75*

*N.B. :—* (1) Attempt *all* questions.

(2) *All* questions carry equal marks.

(3) Draw neat and well labelled diagrams wherever necessary.

1. Give an account of molecular structure and physicochemical properties of water. 15

*Or*

Describe mechanism of phloem loading and unloading across the plant.

2. What is seed dormancy ? Describe in detail causes and methods of breaking seed dormancy. 15

*Or*

Describe in detail mechanism of biosynthesis and practical application of Gibberelin.

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( 2 )

NY—22—2023

3. Describe in detail  $C_4$  pathway and add a note on its significance in plants. 15

*Or*

Describe in detail nature and properties of light. Add a note on quantum yield.

4. Describe in detail pentose phosphate pathway and add a note on its significance. 15

*Or*

What is respiration ? Describe in detail fermentation and its types.

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

- (a) Osmosis
- (b) Photoperiodism
- (c) Hill reaction
- (d) Concept of RQ.

NY—22—2023

2