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**WT—22—2024**

**FACULTY OF SCIENCE**

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

**NOVEMBER/DECEMBER, 2024**

**(CBCS/New Pattern)**

**BOTANY**

**Paper—XI**

**(Plant Physiology)**

**(Tuesday, 10-12-2024)**

**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 are compulsory and carry equal marks.

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

1. Define Transpiration. Give their types and describe in detail mechanism of stomatal transpiration. 15

*Or*

Define mineral nutrition. Give a detailed account on sources, functions and deficiency symptoms of micro-elements.

P.T.O.

2. Describe in detail practical applications and mechanism of biosynthesis of Gibberellin. 15

Or

What is seed dormancy ? Give a detailed account on their causes and methods of breaking seed dormancy.

3. Give a detailed account on C<sub>4</sub> pathway. 15

Or

What is photophosphorylation ? Give a detailed mechanism of non-cyclic photophosphorylation.

4. Give a detailed account on mechanism and regulation of Krebs' cycle. 15

Or

What is oxidative phosphorylation ? Describe in detail mechanism of Electron Transport System (ETS) for ATP synthesis.

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

- (a) Osmosis
- (b) Phytochrome
- (c) Photosynthetic pigments
- (d) Fermentation.