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LB—22—2023

FACULTY OF SCIENCE

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

APRIL/MAY, 2023

(NEW/CBCS PATTERN)

BOTANY

Paper-XI

(Plant Physiology)

(Wednesday, 3-5-2023)

Time : 02.00 p.m. to 05.00 p.m.

Time—Three 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 phloem transport across the plant. Add a note on mechanism of phloem loading and unloading source and sink relationship in plants. 15

Or

Describe in detail about macro-elements and micro-elements. Add a note of functions and deficiency symptoms of any *three* macro-elements.

2. Describe in detail types of spontaneous and induced plant movements. 15

Or

Describe in detail mechanism of biosynthesis of auxins. Add a note on its practical applications.

P.T.O.

3. What is photophosphorylation ? Describe in detail cyclic and non-cyclic photophosphorylation in plants. 15

Or

Describe in detail CAM pathway in plants. Add a note on its significance and biochemical variants of C_4 pathway.

4. Describe in detail Electron transport system. Add a note on its significance in plants. 15

Or

Describe in detail Kreb's cycle in plants. Add a note on its regulation and significance.

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

- (a) Basic laws of thermodynamics
- (b) Vernalization
- (c) Ultra structure of chloroplast
- (d) Factors affecting respiration.