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WT—61—2024

FACULTY OF SCIENCE AND TECHNOLOGY

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

NOVEMBER/DECEMBER, 2024

BOTANY

Paper XVI

(Biochemistry and Plant Metabolism)

(Wednesday, 11-12-2024)

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

Time—Three Hours

Maximum Marks—75

N.B. :- (i) Attempt all questions.

(ii) All questions carry equal marks.

(iii) Draw well labelled diagrams wherever necessary.

1. Give an account of mechanism of transcription. 15

Or

Describe in detail structure, classification and various physicochemical properties of amino acids. 15

2. What are enzymes ? Describe in detail its classification, properties and structure. 15

Or

Define enzyme inhibition. Describe in detail different types of enzyme inhibition. 15

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3. Give an account on mechanism of symbiotic nitrogen fixation. 15

Or

Describe in detail mechanism of nitrate reduction and assimilation of ammonia. 15

4. What are carbohydrates ? Describe in detail their classification and properties. 15

Or

What are lipids ? Describe in detail mechanism of biosynthesis and breakdown of triglycerides. 15

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

- (a) Ramachandran plot
- (b) Significance of K_m and V_{max}
- (c) Nitrogenase
- (d) Carnitine shuttle.

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