

This question paper contains 2 printed pages]

ST—86—2022

FACULTY OF SCIENCE

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

MAY/JUNE, 2022

(New/CBCS Pattern)

BOTANY

Paper—XVI

(Biochemistry and Plant Metabolism)

(Wednesday, 29-06-2022)

Time : 2.00 p.m. to 5.45 p.m.

Time— 3.45 Hours

Maximum Marks—75

N.B. :— (i) Attempt All questions.

(ii) All questions carry equal marks.

(iii) Draw well labelled diagrams wherever necessary.

1. What are amino acids ? Give general structure and describe in detail their Physicochemical properties. 15

Or

Define protein metabolism. Describe in detail their mechanism of biosynthesis. 15

2. What are enzymes ? Describe in detail their classification and add a note on properties of enzymes. 15

Or

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

3. Define nitrogen fixation. Describe in detail mechanism of biological nitrogen fixation. 15

Or

Give an account of role, chemistry, transport and metabolism of sulphur in plants. 15

P.T.O.

4. Give a detailed account of chemistry and classification of carbohydrates. 15

Or

Describe in detail mechanism of β -oxidation of fatty acids. 15

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

(a) Hydrogen bonding and hydrophobic interactions

(b) Significance of K_m and V_{max}

(c) Nitrogenase

(d) Carnitine Shuttle.