

No. of Printed Pages : 03

Roll No.

32590

B.Sc. EXAMINATION, 2025

(Sixth Semester)

(Regular & Re-appear)

BOTANY

Paper-I

Bio-chemistry and Plant Bio-technology

Time : 3 Hours]

[Maximum Marks : 40

Before answering the question-paper, candidates must ensure that they have been supplied with correct and complete question-paper. No complaint, in this regard will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting *two* questions from each Unit. Q. No. **1** is compulsory. All questions carry equal marks and symbol have their usual meaning. Simple calculator is allowed.

1. Define various terms given below : 4×2=8

- (a) Holoenzyme
- (b) Plant hormone
- (c) Beta-oxidation
- (d) Plant tissue culture.

Unit I

2. (a) Describe the enzymes briefly with their general properties. 4

(b) Distinguish between enzymes and proteins. 4

3. Define Plant growth hormones and explain the physiological role of Auxin and Gibberellins. 8

4. Explain the complete process of fatty acid synthesis. 8

5. Discuss about the phytochrome and their mechanism of action. 8

Unit II

6. (a) Give a detailed account on symbiotic nitrogen fixation. 4

(b) Explain nitrogen cycle. 4

7. What is cDNA and explain the construction of cDNA library ? 8

8. Define Totipotency. Explain briefly application of plant tissue culture and enlist important equipments used in tissue culture lab. 8

9. Explain Agrobacterium Mediated Gene transfer with suitable diagram and their application in agriculture. 8

