

Roll No.

(05/25)

5264

B. Sc. EXAMINATION

(Sixth Semester)

BOTANY

Paper-I

Biochemistry and Plant-Biotechnology

Time : Three Hours

Maximum Marks : 40

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

(Compulsory Question)

1. (a) Define Apoenzyme.
- (b) Name the plant hormone used as weedicide.

- (c) Name the substance which is an oxygen scavenger in Nitrogen fixation.
- (d) Cosmids
- (e) Name the precursor of Ethylene.
- (f) Glyoxysomes
- (g) Define Vernalization.
- (h) What is Morphogenesis ? $8 \times 1 = 8$

Unit I

- 2. (a) Describe the various characteristics of enzymes.
- (b) Write a note on Lock and Key Theory.
- (c) Write a note on feedback inhibition. $3+3+2$
- 3. What is Abscission ? Which growth hormone is responsible for abscission ? Describe the discovery, structure, mode of action of this hormone. 8

Unit II

- 4. Write a short note on photoperiodism. Explain its significance in relation to flowering. 8
- 5. (a) What are Lipids ? How are they classified ?
- (b) Write a note on Beta Oxidation of fatty acids. $4+4$

Unit III

- 6. What is nitrogen fixation ? Give an account of biochemistry of nitrogen fixation. 8
- 7. Discuss the following : $4+4$
 - (a) Plasmids
 - (b) CDNAs Library.

Unit IV

8. Describe the different techniques of plant in vitro culture. 8

9.8 (a) Explain the nitrogen cycle. 4

(b) Difference between nitrification and denitrification. 4



(b) Write a note on Beta Oxidation of fatty acids. 4+4

(a) Describe the various characteristics of enzymes. 4+4

Unit III

6. What is nitrogen fixation? Give an account of the biochemistry of nitrogen fixation. 8

7. Discuss the following : 4+4

(a) Plasmids

(b) CDNA Library