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SB—87—2022

FACULTY OF SCIENCE

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

MAY/JUNE, 2022

(New Course)

BOTANY

Paper-IX

(Plant Metabolism and Biotechnology)

(Wednesday, 15-06-2022)

Time : 2.00 p.m. to 4.30 p.m.

Time— 2½ Hours

Maximum Marks—40

N.B. :— (i) Attempt all questions.

(ii) Figures to the right indicate full marks.

(iii) Illustrate your answers with suitable diagrams.

1. What is photophosphorylation ? Describe non-cyclic Photophosphorylation.

15

Or

(i) Explain in detail lock and key hypothesis.

8

(ii) Describe the process of nitrification and denitrification.

7

2. Define gene cloning. Describe process and significance of gene cloning.

15

Or

(i) Describe anther culture and production of Haploid Plant.

8

(ii) Explain production of Secondary Metabolites.

7

P.T.O.

3. Write notes on any *two* of the following :

10

- (i) Totipotency of Plant Cell
- (ii) Fermentation
- (iii) Ammonification
- (iv) NCBI.