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GA—70—2023

FACULTY OF SCIENCE

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

APRIL/MAY, 2023

(New Pattern)

BOTANY

Paper IX

(Plant Metabolism and Biotechnology)

(Wednesday, 3-5-2023)

Time : 2.00 p.m. to 4.00 p.m.

Time—Two Hours

Maximum Marks—40

N.B. :— (i) Attempt All questions.

(ii) Figures to the right indicate full marks.

(iii) Illustrate your answers with suitable diagram.

1. Define light reaction and explain cyclic and non-cyclic photophosphorylation. 15

Or

(i) Explain enzyme activity and add a note on feedback and allosteric regulation. 8

(ii) Give an account of nitrogen cycle. 7

2. What is recombinant DNA technology ? Describe in detail tools and techniques in recombinant DNA technology. 15

P.T.O.

WT

(2)

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Or

- (i) Application of tissue culture in production of diseased free plants. 8
- (ii) What is totipotency ? Give its application in plant tissue culture. 7

3. Write notes on any *two* of the following : 10

- (i) Glycolysis
- (ii) Luck and key model of enzyme action
- (iii) MS medium
- (iv) Genomic library.

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