

This question paper contains 2 printed pages]

SA—52—2025

FACULTY OF SCIENCE AND TECHNOLOGY

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

APRIL/MAY, 2025

BOTANY

(Plant Metabolism and Biotechnology-IX)

(Saturday, 19-4-2025)

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

Time—Two Hours

Maximum Marks—40

Note :— (i) Attempt *all* questions.

(ii) Figures to the right indicate full marks.

(iii) Illustrate your answer with suitable diagrams.

1. Define respiration. Describe the steps involved in Kreb's cycle. 15

Or

(a) Give in detail classification of enzymes. 8

(b) Describe symbiotic nitrogen fixation (N_2) in plants. 7

2. What is genetic engineering ? Describe Agrobacterium mediated gene transfer technique in genetic engineering. 15

Or

(a) Micropropagation 8

(b) Explain the process of somatic hybridization. 7

P.T.O.

WT

(2)

SA—52—2025

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

10

- (a) Alcoholic fermentation
- (b) Physical nitrogen (N_2) fixation
- (c) Callus culture
- (d) Transgenic plants.

SA—52—2025

2