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ST—196—2022

FACULTY OF SCIENCE AND TECHNOLOGY

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

MAY/JUNE, 2022

(CBCS/New Pattern)

BOTANY

Paper—XVII

(Biotechnology and Genetic Engineering)

(Friday, 1-7-2022)

Time : 2.00 p.m. to 5.45 p.m.

Time— 3.45 Hours

Maximum Marks—75

N.B. :— (i) All questions are compulsory.

(ii) All questions carry equal marks.

(iii) Illustrate your answers with suitable diagrams wherever necessary.

1. Describe in detail stages in micro propagation. Add a note on its advantages and disadvantages. 15

Or

Explain in detail Somaclonal variations and its applications.

2. Explain in detail Somatic hybridization and its applications. 15

Or

Describe in detail anther, pollen and ovule culture and add a note on its applications.

3. Describe in detail basic techniques in molecular genetics. 15

Or

Explain in detail physical maps of DNA molecules based on RFLP and fine structure of maps.

P.T.O.

4. Write in detail vectors in gene cloning and their choice. 15

Or

Explain small RNAs and their biogenesis.

5. Write short notes on any *three* out of four : 15

(a) Culture media

(b) Embryo Culture

(c) In-vitro site specific mutagenesis

(d) Cosmids.