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LB—134—2023

FACULTY OF SCIENCE

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

APRIL/MAY, 2023

(NEW/CBCS PATTERN)

BOTANY

Paper-XVII

(Biotechnology and Genetic Engineering)

(Monday, 8-05-2023)

Time : 02.00 p.m. to 05.00 p.m.

Time—Three Hours

Maximum Marks—75

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

(ii) All questions carry equal marks.

(iii) Draw well labelled diagrams wherever necessary.

1. Explain in detail stages in Micropropagation its advantages and disadvantages. 15

Or

Describe the techniques and utility of organogenesis.

2. Elucidate methods of protoplast culture and its applications. 15

Or

Describe methods for making artificial seeds and their applications.

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(2)

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3. Explain in detail basic techniques in Molecular Genetics. 15

Or

Describe the steps in construction of genomic libraries.

4. Explain small RNAs and their biogenesis. 15

Or

Explain in detail about restriction and nucleic acid modifying enzymes.

5. Write short notes on any *three* of the following : 15

(a) Culture media

(b) Ovule culture

(c) cDNA libraries

(d) Gene silencing.

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