

Roll No.

DD-775

M. Sc. (Fourth Semester) EXAMINATION, 2020

BOTANY

Paper Third

(Biotechnology-II)

(Plant Cell, Tissue and Organ Culture)

Time : Three Hours

Maximum Marks : 80

Note : Attempt all the *four* questions. *One* question from each Units is compulsory. All questions carry equal marks.

Unit—I

1. What is clonal prepagation ? Explain meristem and shoot tip culture with suitable diagrams.

Or

Write short notes on the following :

- (a) Cellular differentiation
- (b) Auxillary bud proliferation

Unit—II

2. Describe the methods and applications of protoplast fusion.

Or

Write short notes on the following :

- (a) Androgenesis
- (b) Regeneration of hybrid plants

Unit—III

- 3. Give an account on encapsulation, dehydration and slow growth method for Germplasm storage.

Or

Write short notes on the following :

- (a) Cryoprotectants
- (b) Ethical concerns of plant tissue culture

Unit—IV

- 4. Write an essay on techniques of producing transgenic plants for resistance to biotic and abiotic stress.

Or

Write short notes on the following :

- (a) Immobilized cell system
- (b) Artificial seeds