



JAZ-003-1143003

Seat No. _____

M. Sc. (Sem. III) Examination

December - 2019

Botany : Paper - 315

(Propagation Techniques)

Faculty Code : 003

Subject Code : 1143003

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

Instruction : All questions are compulsory and carry equal marks.

- 1** Answer any **seven** questions from the following : **14**
- (a) Distinguish between seed and artificial seed.
 - (b) What are the secondary metabolites ? Name few of them.
 - (c) Write test for identification of viable protoplast.
 - (d) Write major components of MS media.
 - (e) Write applications of plant tissue culture in floriculture.
 - (f) What is layering? Write the types of layering techniques.
 - (g) Write the factor affecting grafting.
 - (h) What is significance of nursery ?
 - (i) Define chimeras.
 - (j) Write the application of vegetative propagation in horticulture.
- 2** Write notes on any **two** of the following : **14**
- (a) Budding techniques and its applications.
 - (b) Cuttings and its importance in horticulture.
 - (c) Nursery technique.
- 3** Write notes on the following : **14**
- (a) Various factors affecting oil plant propagation.
 - (b) Genetic control of propagation in plants.

OR

- 3** Write notes on the following : **14**
- (a) Selection criteria of the explant.
 - (b) Types of tissue culture media.
- 4** Answer the following questions : **14**
- (a) What is callus ? Write importance of callus culture in Micropropagation.
 - (b) Define differentiation, dedifferentiation and re-differentiation of plant cell. Add your note on totipotency and role of phytohormones in its regulation.
- 5** Write notes on any **two** of the following : **14**
- (a) Methods of protoplast isolation.
 - (b) Somaclonal variations.
 - (c) Secondary metabolites.
 - (d) Multiple shoot culture.
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