Roll No. | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 11

M.Sc. Biotechnology (2018 Batch) (Sem.-2)

PLANT TISSUE CULTURE

Subject Code : MBT-211

M.Code : 76250

Time : 3 Hrs. Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SEVEN questions carrying SIX marks each and students have to attempt any FIVE questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. Write briefly :

a) Callus

b) Protoplast

c) Genetic transformation

d) Micropropagation

e) Diploid Vs. Haploid plants

f) Secondary metabolite

g) Biotransformation

h) Growth regulators

i) Cell Totipotency

j) Transgenic plants

SECTION-B

2. Explain briefly elements of plant tissue culture.

3. Describe briefly protoplast isolation, culture and fusion.

4. Discuss chromosome elimination in wild crosses with suitable examples.

5. Describe briefly anther and microspore cultures.

6. Describe briefly biosynthesis and storage of any one plant growth regulator.

7. Discuss cryopreservation of germplasm with merits and demerits.

8. Describe the production of secondary metabolites by plant tissue culture.

SECTION-C

9. Write an essay on tissue culture techniques used for plant improvement.

10. Describe the physiological effects and mechanism of action of gibberellins.

11. What are somaclonal variations and how they occur? Explain briefly. Also highlight applications of somaclonal variations.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.