

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2018
(Third Semester)

Branch -**BOTANY**

CORE ELECTIVE-II - PLANT TISSUE CULTURE

Time: Three Hours

Maximum: 75 Marks

SECTION -A (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 x 6 = 30)

- 1 a Analyze the principles of totipotency in plants.
OR
b Analyze the role of growth hormones in plant tissue culture.
- 2 a Discuss the methodology of Organogenesis.
OR
b How will you prepare the artificial seeds by using somatic embryos?
- 3 a Explain the methods to isolate the somaclonal variants.
OR
b Explain the steps involved in embryo culture.
- 4 a Describe the meristem culture for virus free plant production.
OR
b What are secondary metabolites? Explain the types of secondary metabolites with suitable examples.
- 5 a Give an account of technique for improvement of Banana.
OR
b What are the methods used for improvement of Grapes?

SECTION -B (45 Marks)

Answer any THREE questions

ALL questions carry EQUAL Marks (3 x 15 = 45)

- 6 Discuss the following :
i) Types of PC medium (ii) Chemical constituents of nutrient medium
- 7 Explain the methodology of somatic hybridization.
- 8 Describe the steps involved in callus culture.
- 9 Analyze the principles and methodology of gene transfer by gene Gun.
- 10 Discuss the applications of plant tissue culture.