

**PSG COLLEGE OF ARTS & SCIENCE**  
(AUTONOMOUS)  
**BSc DEGREE EXAMINATION MAY 2019**  
(Sixth Semester)

Branch- **BOTANY**

**CORE ELECTIVE PAPER - II ; PLANT TISSUE CULTURE**

Time : Three Hours

Maximum : 75 Marks

**SECTION-A (20 Marks)**

Answer **ALL** questions

**ALL** questions carry **EQUAL** marks (10 x 2 = 20)

- 1 Define Totipotency.
- 2 Write a note on cell suspension culture.
- 3 Mention any two applications of Gibberellins.
- 4 Write short notes on Abscisic acid.
- 5 What is haploid production?
- 6 What are cybrids?
- 7 What is micropropagation?
- 8 Write about cryopreservation.
- 9 What are secondary metabolites?
- 10 Mention the impact of tissue culture in industry.

**SECTION - B (25 Marks)**

Answer **ALL** Questions

**ALL** Questions Carry **EQUAL** Marks (5 x 5 = 25)

- 11 a Give an account on media preparation and its types.  
OR  
b Explain the terms - Dedifferentiation and redifferentiation.
- 12 a List out the physiological activities of auxin and explain its applications.  
OR  
b Write short notes on cytokinins.
- 13 a Briefly explain the technique of somatic embryogenesis.  
OR  
b Write a note on hardening and acclimatization.
- 14 a Explain the procedure of producing synthetic seeds and write its importance.  
OR  
b Write short notes on the impact of tissue culture on agriculture.
- 15 a Explain the types of secondary metabolites.  
OR  
b Write short notes on cell immobilization and explain its importance.

**SECTION - C (30 Marks)**

Answer any **THREE** Questions

**ALL** Questions Carry **EQUAL** Marks (3 x 10 = 30)

- 16 Write an essay on organ culture and its application in tissue culture.
- 17 What are plant growth regulators? Explain their applications in tissue culture.
- 18 What is protoplast culture? Explain the procedures and write its applications.
- 19 Discuss the tissue culture techniques followed in Forestry and Agriculture.
- 20 Explain elaborately on the production of secondary metabolites in plants.