

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION DECEMBER 2017
(Fifth Semester)

Branch- **BIOCHEMISTRY**

TISSUE CULTURE & BIOTECHNOLOGY

Time : Three Hours

Maximum : 75 Marks

SECTION-A 120 Marks)

Answer **ALL** questions

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

- 1 What are auxins?
- 2 Define protoplast.
- 3 What are Ti plasmids?
- 4 What is Transgenic plant?
- 5 List out two selectable marker genes.
- 6 Define passage number.
- 7 What are the monoclonal anti bodies?
- 8 Mention the two important uses of vaccinia viruses.
- 9 What is RFLP?
- 10 Define FIAC.

SECTION - B (25 Marks)

Answer **ALL** Questions

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

- 11 a Write short notes on callus culture.
OR
b What is androgenesis? Add a note on it.
- 12 a Give an account on TMV.
OR
b Comment on golden rice and its uses.
- 13 a List out the constituents of animal cell culture media.
OR
b Explain hoe SV 40 is used as a vector in gene transfer.
- 14 a Elaborate the production of recombinant interferons.
OR
b Write short notes on antibody engineering.
- 15 a Explain the process of nuclear transfer in animals.
OR
b Give a brief account on antisense technology.

SECTION - C (30 Marks)

Answer any **THREE** Questions

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

- 16 Describe the different methods involved in the isolation of protoplast.
- 17 Discuss the production of pest and herbicide resistant transgenic plants and its advantages.
- 18 Describe the process involved in cell transformation and the characteristics of transformed cells.
- 19 Explain the production of monoclonal antibody with a neat diagram.
- 20 What is gene therapy? Explain its types and applications briefly.