

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

Branch -BIOTECHNOLOGY
Coy# BleUnW-
PLANT TISSUE CULTURE AND TRANSGENICS TECHNOLOGY

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 x 2 = 20)

Answer All Questions:

- 1 What is an Cybrids?
- 2 Define totipotency?
- 3 What is meant by cell culture?
- 4 Give a note on Nitsch's medium.
- 5 Define Organogenesis.
- 6 Define Sbmoclones.
- 7 Artificial seeds.
- 8 Define cell line propagation.
- 9 Define plantibodies.
- 10 Define EPSPS.

SECTION - B (25 Marks!)

Answer ALL Questions

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

- 11 a Explain the aseptic techniques employed in plant tissue culture?
OR
b Give a brief account on various equipments and tools needed for establishing a tissue culture laboratory?
- 12 a Describe the method and discuss the importance of anther culture?
OR
b . Discuss the different types of protoplast fusion.
- 13 a Give a general account of the principle, method and importance of meristem culture.
OR '
b What is soma clonal variation. Discuss the possible mechanisms causing somaclonal variation. .
- 14 a Give a brief account on micro propagation methods.
OR
b Describe in brief, Classification, biosynthesis and major classes of
• alkaloids/
- 15 a What are plasmids? Describe the plasmid mediated gene transfer process.
OR
b Give a short account on Herbicide resistant plants.

SECTION - C (30 Marks)

Answer any THREE Questions

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

- 16 -Detail about the various sterilization process employed in plant tissue culture process?
- 17 Describe the technique and applications of anther and pollen culture for the production of homozygous lines.
- 18 What is meristem culture? Discuss its applications in the production of virus free plants.
- 19 Give an account of recent developments about transgenic crops for insect pest resistance and nutritional quality.
- 20 Discuss the importance of transgenic crops for developing countries.

Z-Z-Z

END