



US – 390

VI Semester B.Sc. Examination, May 2017
(Fresh+Repeaters)
(CBCS – 2016 – 17 & Onwards/2013 – 14 & Onwards)
BIOTECHNOLOGY – VII
Plant Biotechnology

Time : 3 Hours

Max. Marks : 70

Instruction : Draw neat labelled diagrams *wherever* necessary.

SECTION – A

- I. Write short notes on the following : (5×2=10)
- 1) Callus
 - 2) Mericlones
 - 3) Vegetative propagation
 - 4) Intellectual property rights
 - 5) Reporter genes.



SECTION – B

- II. Write **any four** of the following. (4×5=20)
- 6) Describe the factors affecting micropropagation.
 - 7) Explain the role of auxins and cytokinins in plant tissue culture.
 - 8) Give an account on the selection of somaclonal variants.
 - 9) Describe the methods of isolation of protoplasts.
 - 10) Write a note on trade secrets.

SECTION – C

- III. Answer **any three** of the following. (3×10=30)
- 11) Describe the procedure of anther culture. Add a note on its applications.
 - 12) Define secondary metabolites. Describe the methods of production of secondary metabolites.
 - 13) Describe the methods of protoplast fusion. Write a note on the selection of somatic hybrids.
 - 14) Describe the applications of plant tissue culture in the field of forestry.
 - 15) What is Agrobacterium mediated gene transfer ? Explain the types of vectors based on Ti-plasmid.

P.T.O.



SECTION - D

IV. Answer the following in **one** word or **a** sentence **each**.

(10x1=10)

- 16) Expand HEPA.
- 17) What are elicitors ?
- 18) Name the fungus from which gibberellic acid was discovered.
- 19) What are heterokaryons ?
- 20) Name the disease caused by Agrobacterium tumefaciens.
- 21) Define somatic embryos.
- 22) Mention any one of the limitations of edible vaccines.
- 23) What are synthetic seeds ?
- 24) Name any two criteria for a plant variety to be recognised under PBR.
- 25) What is GATT ?

