

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

(10x1=10)

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

- 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 ?
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