



SM – 407

VI Semester B.Sc. Examination, May/June 2018  
(CBCS) (2016-17 and Onwards) (2013-14 and Onwards) (Fresh + Repeaters)  
**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) G. Haberlandt.
  - 2) Hairy root culture.
  - 3) Somaclones.
  - 4) Acclimatization.
  - 5) Endosperm.

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**SECTION – B**

- II. Write **any four** of the following : (4×5=20)
- 6) List the applications of pollen culture.
  - 7) Write a note on the applications of Micropropagation.
  - 8) Discuss the importance of organ culture.
  - 9) Explain the types of protoplast culture.
  - 10) What is a patent ? Mention its limitations.

**SECTION – C**

- III. Answer **any three** of the following : (3×10=30)
- 11) Discuss in detail the procedure for invitro embryo culture. Add a note on its significance.
  - 12) What are phytoalexins ? Discuss the industrial production of shikonin.

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- 13) Write in detail about invitro somatic embryogenesis.
- 14) Describe the microprojectile method of gene transfer with a diagram. Add a note on its disadvantages.
- 15) What are edible vaccines ? Discuss in detail its production with a suitable example.

## SECTION - D

(10×1=10)

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

- 16) What is hypochlorite ?
- 17) Name any two commonly used vitamins in tissue culture media.
- 18) Expand BAP.
- 19) What are somatic hybrids ?
- 20) Expand TIP.
- 21) What is fluorescein diacetate ?
- 22) Define explant.
- 23) Expand TRIPS.
- 24) What is acetosyringone.
- 25) Define dedifferentiation.