

M.Sc. (Botany) (CBCS Pattern) Semester-IV  
**PSCBOTT13 - Paper-XIII - Plant Biotechnology**

P. Pages : 1

Time : Three Hours



**GUG/S/25/11355**

Max. Marks : 80

- 
- Notes : 1. All questions are compulsory and carry equal marks.  
2. Draw well labelled diagrams wherever necessary.

1. What is gene cloning? Describe principle and techniques of recombinant DNA technology. 16

**OR**

Write notes on:-

- a) Agrobacterium as natural genetic engineer. 8
- b) Transposon mediated gene tagging. 8

2. What is proteomics? Write details on protein profiling. 16

**OR**

Write notes on :-

- a) Fermentation technology. 8
- b) Bacterial transformation. 8

3. How the transgenic plants are produced by using methods of gene transfer technology? 16

**OR**

Write notes on:-

- a) Application of plant tissue culture. 8
- b) Production of haploid and triploid. 8

4. What is Bioinformatics? Give details on secondary database. 16

**OR**

Write notes on :

- a) Information Retrieval system. 8
- b) Prediction of pro-and eukaryotic genes. 8

5. Write short notes on 16

- a) DNA libraries. 4
- b) DNA sequencing. 4
- c) Somatic embryos 4
- d) Sequin 4

\*\*\*\*\*