

M.Sc.(Botany) (CBCS Pattern) Semester-IV
PSCBOTT15.2 - Paper-XV - Molecular Biology and Plant Biotechnology-II

P. Pages : 1

Time : Three Hours



GUG/W/24/11359

Max. Marks : 80

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

- 1.** Give detail account on Agrobacterium mediated gene transfer in the production of transgenic plants. **16**

OR

Write on:

- a) Chloroplast transformation. **8**
b) Features of Ti & Ri plasmids. **8**

- 2.** Describe development of Herbicide and Disease resistant transgenic crops citing suitable examples. **16**

OR

Write on:

- a) Hazards and safety regulations for transgenic plants. **8**
b) Biodegradable plastic. **8**

- 3.** What is plant tissue culture? Describe different types of plant cell cultures along with their applications. **16**

OR

Write on:

- a) Gene expression in Chloroplasts. **8**
b) Gene expression in post translational level. **8**

- 4.** Describe organization, functions and regulation of Nitrogen fixing genes in Klebsiella pneumoniae. **16**

OR

Write on:

- a) Molecular Marker Assisted Selection. **8**
b) Pollution control through genetically modified organisms. **8**

- 5.** Write short note on:
- a) Particle Bombardment. **4**
b) Edible vaccines. **4**
c) Somaclonal variations. **4**
d) RAPD markers. **4**
