

M.Sc. (Botany) (NEP Pattern) Semester-IV
04MSCBOT05.1 - Paper-III : Molecular Biology and Plant Biotechnology-IV

P. Pages : 1

Time : Three Hours



GUG/S/25/16321

Max. Marks : 80

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

1. What are plasmids? Describe the features of Ti and Ri plasmids in detail. 16
- OR**
- Write on-
- a) Electroporation method of Direct gene transfer. 8
- b) Transgene stability and gene silencing. 8
2. Describe Herbicide resistance and insect resistance plants in detail. 16
- OR**
- Write on-
- a) Biodegradable plastics. 8
- b) Edible vaccines. 8
3. Explain the mechanism of protoplast isolation culture and fusion in detail. 16
- OR**
- Write on-
- a) Gene expression in Mitochondria. 8
- b) Somaclonal variations. 8
4. Describe in detail organization, function and regulation of Nitrogen fixing genes in Klebsiella. 16
- OR**
- Write on-
- a) RFLP maps. 8
- b) SCAR. 8
5. Write short notes on-
- a) Pollen transformation. 4
- b) Biopesticides. 4
- c) Somatic embryogenesis. 4
- d) Map based cloning. 4
