

**R09**

Code: 9A23505

B.Tech III Year I Semester (R09) Supplementary Examinations June 2017

**PLANT BIOTECHNOLOGY**

(Biotechnology)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions

All questions carry equal marks

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- 1 Explain in detail the composition and preparation of tissue culture media. Add a note on callus generation.
- 2 Write short notes on the following:
  - (a) Production of haploids.
  - (b) Somaclonal variations.
- 3 Write in detail the process for the production of secondary metabolites from plant tissue cultures.
- 4 Explain the following:
  - (a) Agrobacterium based vectors.
  - (b) Electroporation.
  - (c) Microinjection.
- 5 Explain in detail the production of disease resistance plants using genetic engineering and their applications.
- 6 Give an account on:
  - (a) Drought resistance plants generation using genetic engineering.
  - (b) Salt resistance plants generation using genetic engineering.
- 7 Write briefly the applications of plant biotechnology for the production of industrial products.
- 8 Write short notes on:
  - (a) Metabolic engineering for plant primary metabolites.
  - (b) Metabolic engineering for secondary metabolites.

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