

R07**Code: R7312305**

B.Tech III Year I Semester (R07) Supplementary Examinations, May 2013

PLANT BIOTECHNOLOGY

(Biotechnology)

Time: 3 hours

Max. Marks: 80

Answer any FIVE questions
All questions carry equal marks

- 1 Define totipotency. How it can be exploited in vitro for plant regeneration?
- 2 What is cryopreservation? Explain its role in germplasm conservation with examples.
- 3 Why plants produce secondary metabolites? Discuss various strategies for enhancing the yield of secondary metabolites under in vitro conditions.
- 4 Discuss direct gene transfer methods in detail. Add a note on its merits and demerits.
- 5 What is abiotic stress? Give a strategy for production of transgenic plants for any one kind of abiotic stress.
- 6 Explain the development of the following:
 - (a) Herbicide resistant transgenics.
 - (b) Disease resistant transgenics.
- 7 How plant tissue culture is used as an alternative for production of biologically active proteins? Describe with suitable examples.
- 8 How can biotechnology be used to modify plant metabolite content? Explain with a case study approach.
