

Code: 9A23710

R09

B.Tech IV Year I Semester (R09) Supplementary Examinations, May 2013

METABOLIC ENGINEERING

(Biotechnology)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 Write different models for cellular reactions.
- 2 What are primary metabolites? Explain alteration of feedback regulation.
- 3 Explain the following:
 - (a) Precursor effects.
 - (b) Idiophase relationship.
- 4 What is bioconversion? Explain factors affecting bioconversions.
- 5 What are strain selections? Write methods of genetic improvements of strains.
- 6 Write a detailed note on metabolic flux analysis and its applications.
- 7 Write short notes on:
 - (a) Structure of metabolic network.
 - (b) Metabolic pathway synthesis algorithms.
- 8 Write applications of metabolic engineering in environmental bioremediation and biomass conversion fields.
