Code: 9A23710

R09

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

METABOLIC ENGINEERING

(Biotechnology)

Time: 3 hours Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks
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1 Describe the various steps involved in the regulation of enzyme concentration.

2 Write a short note on:
(a) Jacob-Monod model.
(b) Alterations of feedback regulation.

3 Enumerate the sources which produce secondary metabolites. Add a note on their applications.

4 (a) What is bioconversion? Explain different factors affecting bioconversions.
(b) Write a short note on product inhibition.

5 What technologies are to be employed for the genetic improvement of bacterial strains?

6 (a) Write a short note on sensitivity analysis.
(b) Give the significance of thermodynamic laws in cellular processes.

7 Describe theorems of metabolic control analysis.

8 Describe the applications of metabolic engineering in agriculture.

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