

**R09****Code: 9A23710**

B.Tech IV Year I Semester (R09) Regular &amp; Supplementary Examinations December 2015

**METABOLIC ENGINEERING**

(Biotechnology)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 Explain Jacob – Monod model.
- 2 How feedback control works in the aspartate family?
- 3 Describe the metabolic pathways involved in the production of secondary metabolites.
- 4 Describe various factors affecting bioconversions.
- 5 Give strain improvement methods for increasing enzyme production.
- 6 Determine metabolic fluxes in lysine biosynthesis.
- 7 Explain the different approaches for determining group control coefficients.
- 8 How to improve the yield of antibiotics through metabolic engineering techniques?

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