

R07

Code: R7222306

B.Tech II Year II Semester (R07) Supplementary Examinations, April/May 2013

BIOPROCESS ENGINEERING

(Biotechnology)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions
All questions carry equal marks

1. Discuss in detail the unit operations involved in downstream bioprocessing with a flow sheet.
2. Explain in detail the different controlling parameters in a fermentation process.
3. Discuss on
 - (a) Fed – batch fermentation.
 - (b) Air-lift bioreactor.
4. Discuss in detail on
 - (a) Simple and complex media.
 - (b) Commercial medium for large scale bioprocess.
5. Discuss in detail the stoichiometry of cell growth and product formation.
6. Give an account on oxygen consumption and heat evolution in aerobic cultures.
7. Write an account on structured models for growth and product formation.
8. Explain the production of enzymes in submerged and solid-state processes.
