

2014
(December)

Time : 2 hours

Full Marks : 40

The questions are of equal value.

*Answer any **four** questions.*

**(BIOPROCESS TECHNOLOGY AND
INDUSTRIAL BIOTECHNOLOGY)**

1. Explain raw material and media formulation for fermentation process.
2. Write short notes on the following :
 - (a) Photo-bioreactor
 - (b) Design of Bioreactor
3. What is the role of bioprocess parameters in bioprocess engineering.
4. Write short notes on the following :
 - (a) Precipitation and drying process
 - (b) Mineral beneficiation

5. Describe the process of whole cell immobilization and its application.
6. Write short notes on the following :
 - (a) Techniques of food technology
 - (b) Industrial production of ethanel
7. Air and media sterilization is necessary for any fermentation process. Explain.
8. Write short notes on the following :
 - (a) Production of Penicillin
 - (b) Production of Citric Acid

