



[Time: 3 Hours]

[Max. Marks: 100]

BIOPROCESS TECHNOLOGY

(RS 2 & RS 3)

Q.P. CODE: 9313

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAY (Answer any FOUR)

4 X 25 = 100 Marks

1. Write notes on:
a) Air Spargers
b) Achievement and maintenance of aseptic conditions
(12 + 13 = 25)
2. a) Distinguish between, i) aerobic and anaerobic fermentations
ii) ion – exchange and affinity chromatography
iii) Single and 2-stage continuous fermentation systems.
b) Discuss economic considerations of a fermentation process
(15 + 10 = 25)
3. a) Write a note on agitation in fermentations
b) Discuss the importance of various probes in a fermenter
c) How is foam controlled?
(10+10+5 = 25)
4. Write short notes on:
a) Metabolic response assay
b) Cell disintegration methods
c) Enzyme inhibition
d) Standards of air purity
e) impeller design
(5x5 = 25)
5. a) Discuss fed-batch fermentations. How are they different from continuous fermentation?
b) Discuss Principles and application of solvent extraction and electrophoresis.
(12+13 = 25)
6. a) Explain the Rheology of fermentation system

* * * * *