B. TECH.

(SEM. VI) EXAMINATION, 2006-07

INDUSTRIAL FERMENTATION-I

Time : 3 Hours] [Total Marks : 100

Note : (1) Attempt all questions.
(2) All questions carry equal marks.

1 Attempt any two of the following : 10x2=20

(a) Give a brief account of chronological development of fermentation process.
(b) Describe component parts of a fermentation process.
(c) Explain critically the mechanism of submerged fermentation and give its merits and demerits.

2 Attempt any two of the following : 10x2=20

(a) Describe microbial growth kinetics.
(b) What is the feel batch culture? Describe its kinetics.
(c) Briefly describe different regulatory mechanism involved in controlling the catabolic process of microbe's batch culture.
3 Attempt any two parts of the following : 10x2=20
(a) Describe isolation of mutants that do not produce feedback, inhibitors or repressors.
(b) Briefly describe preservation of industrially improved microorganisms.
(c) Describe lypnolization.

4 Attempt any two of the following : 10x2=20
(a) Briefly describe medium formulation.
(b) Describe oxygen requirement in media for industrial fermentation.
(c) Discuss media for alcohol industry.

5 Attempt any two of the following : 10x2=20
(a) Describe principle of sterilization and write down precautions taken during sterilization.
(b) Describe design of batch sterilization process.
(c) Discuss aseptic transfer of inocula to fermenter.