

Paper Code: BT-22	Roll No.										

M.Tech.
(SEM II) EVEN SEMESTER EXAMINATION, 2015-16
FERMENTATION TECHNOLOGY

[Time: 3 Hours]

[Max. Marks: 100]

Note: Attempt any FIVE questions.

- Q.1** (a) How they affect the fermentation process during product formation? [5x2]
 (i) Carbon source (ii) Organic and inorganic nitrogen source (iii) Additional carbon source (iv) pH and Temperature (v) Agitation and Aeration
- (b) Write short note on any **FOUR** of the following [2.5x4]
 (i) Feedback control (ii) Feedback repression (iii) Constitutive feedback control (iv) Cumulative feedback control (v) Resting cells and their preparation method (vi) One factor at a time method with example
- Q.2** (a) Describe five major groups of commercially important fermentations. [5]
 (b) Write short note on the following [5x3]
 (i) Media formulation (ii) Medium optimization (iii) Strain improvement
- Q.3** What is overproduction of metabolites? What are different methods by which metabolites can be overproduced in a microorganism? [20]
- Q.4** (a) Describe industrial production of penicillin or streptomycin by fermentation. [10]
 (b) Explain the isolation and preservation method for industrially important micro organisms. [10]
- Q.5** Explain briefly statistical method of media optimization. What are the advantages of statistical method over classical method? [20]
- Q.6** How can you screen a microbial strain producing amylase? Describe both primary and secondary screening. [20]
- Q.7** (a) Describe the fermentative production of acetic acid by submerged fermentation process. [10]
 (b) "Permeabilization of cell membrane is not a method of strain improvement." Explain the statement. [10]