

GUJARAT TECHNOLOGICAL UNIVERSITY
ME- SEMESTER II- EXAMINATION – SUMMER 2015

Subject Code: 2721601**Date:30/05/ 2015****Subject Name: Industrial Biotechnology****Time: 2:30 PM – 5:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Write in detail about the Microbial Metabolites **07**
 (b) Write in detail about Medium formulation and its components **07**
- Q.2** (a) Describe the methods for storage of microorganism at reduced temperature. **07**
 (b) Give comparison of batch and continuous culturing in industrial processes. **07**
- OR**
- (b) Write advantages and applications of fed batch culture. **07**
- Q.3** (a) Write the methods for isolation of industrial important microorganisms and explain any one in detail. **07**
 (b) Give importance and name of sources for carbon as a media component. **07**
- OR**
- Q.3** (a) Explain mechanisms for suspended solids may be separated from a fluid during filtration. **07**
 (b) Write criteria for sub-culturing with effect of substrate concentration on the specific growth rate of micro-organisms. **07**
- Q.4** (a) Describe types of reaction contribute to the loss of nutrient quality during sterilization. **07**
 (b) Explain method of sporulation on solidified media for inoculation of mycelia process. **07**
- OR**
- Q.4** (a) Give reasons why oxygen is required for industrial fermentation? **07**
 (b) Explain Tower fermenter and Cyindro-conical fermenter **07**
- Q.5** (a) Write the names of types of fermentation. Explain Dual fermentation in detail. **07**
 (b) Write production process for Amylases **07**
- OR**
- Q.5** (a) Define the term Antibiotic Describe the production process of Benzyl Penicillin **07**
 (b) What is Modern biotechnology? Write importance and applications of it. **07**
