

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER– IV• EXAMINATION – Winter 2013

Subject Code: 141402**Date: 19/12/2013****Subject Name: Food and Industrial Microbiology****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) Describe the microbial spoilage of fruits and vegetables **07**
(b) Describe the sources and incidences of microbes in fruits and vegetables **07**
- Q.2** (a) Describe the defects in milk and milk products **07**
(b) Describe the pasteurization, thermization and ultra pasteurization of milk products **07**
- OR**
- (b) Describe the batch and fed batch fermentations. **07**
- Q.3** (a) What are the aerobic and anaerobic microbes responsible for spoilage of canned products? **07**
(b) Comment on types of chemical preservatives, mode of action and their industrial applications. **07**
- OR**
- Q.3** (a) How foods can be preserved by use of low temperature, high temperature and drying? **07**
(b) Describe various methods of high temperature preservation, and significance of D, F Values, 12D concept. **07**
- Q.4** (a) What do you understand by food borne diseases and food poisoning? Give examples of such cases. **07**
(b) Describe few food borne pathogens and intoxication agents. **07**
- OR**
- Q.4** (a) Describe techniques for isolation of microorganisms, and screening methods for industrial applications. **07**
(b) What is the importance of development of strains for industrial applications? **07**
- Q.5** (a) Describe the important parts and their functions. **07**
(b) Illustrate the Principles, sterilization of equipments, medium, and air. **07**
- OR**
- Q.5** (a) Describe the production details of ethyl alcohol, or citric acid. **07**
(b) Comment on procedure and techniques for recovery and purification of fermentation products. **07**
