

**GUJARAT TECHNOLOGICAL UNIVERSITY****B. E. Sem. – IV - Examination –June- 2011****Subject code: 141402****Subject Name : Food and Industrial Microbiology****Date:06/06/2011****Time: 10.30 am – 01.00 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) Answer the following in short and to the points **08**  
 (i) Radappertization.  
 (ii) Ropiness in bread.  
 (iii) Mycotoxins.  
 (i) Explain primary screening of microorganism with suitable.
- (b) Discuss role of Benzoic acid, Sorbic acid and Nisin in food processing with their mode of actions. **06**
- Q.2 (a) Why fruits are most likely affected by molds? Discuss various spoilage conditions in fruits and vegetables. **07**  
 (b) Discuss raw materials used as a carbon source in fermentation media. **07**
- OR
- (b) Discuss general process adopted during product recovery from fermentation broth. **07**
- Q.3 (a) Discuss various spoilage conditions in milk and milk products with its causative organisms. **07**  
 (b) List changes in quality of food due to radiation. **03**  
 (c) What are ideal characteristics of inoculum cultures. **04**
- OR
- Q.3 (a) Explain preservation of food with high temperature. **07**  
 (b) Brief about Aseptic packaging. **03**  
 (c) What are criteria to be considered before decision to transfer of inoculum? **04**
- Q.4 (a) List common pathogens responsible for food Borne illness. Explain Botulism, Staphylococcal Gastroenteritis and listeriosis. **06**  
 (b) Discuss low temperature preservation of food. **04**  
 (c) Discuss filtration technique and factors affecting on it in separation of biomass from fermentation broth. **04**
- OR
- Q.4 (a) What is hydrogen swell? Explain spoilage of canned foods by Thermophilic Spore-forming bacteria. **07**  
 (b) Brief about use of sterilization in food industry. **03**  
 (c) Explain recovery process of citric acid from fermentation broth. **04**
- Q.5 (a) Explain function of Malting and Mashing process. **06**  
 (b) Classify canned food based on acidity. **04**  
 (c) Brief about IMF and discuss its microbial aspects. **04**
- OR
- Q.5 (a) What are essential general features of ideal fermenter? **06**  
 (b) Discuss Industrial Important four Molds. **04**  
 (c) Discuss 12 D Concept for canned food. **04**

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