

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
