Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER- IV• EXAMINATION - Winter 2013

Subject Code: 141402 Subject Name: Food and Industrial Microbiology Time: 2:30 pm – 5:00 pm Instructions: Date: 19/12 Total Mark			Date: 19/12/2013	
		ks: 70		
		Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.		
Q.1	(a) (b)	Describe the microbial spoilage of fruits and vegetables Describe the sources and incidences of microbes in fruits and vegetables	07 07	
Q.2	(a) (b)	Describe the defects in milk and milk products Describe the pasteurization, thermization and ultra pasteurization of milk products	07 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. OR	07	
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) (b)	Describe the important parts and their functions. Illustrate the Principles, sterilization of equipments, medium, and air. OR	07 07	
Q.5	(a) (b)	Describe the production details of ethyl alcohol, or citric acid. Comment on procedure and techniques for recovery and purification of fermentation products.	07 07	
