Seat No.:	Enrolment No.
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GUJARAT TECHNOLOGICAL UNIVERSITY

B. E. - SEMESTER – IV • EXAMINATION – WINTER 2012

	•	code: 141402 Date: 27/12/2012	
Tin	ie: 02	Name: Food and Industrial Microbiology 2.30 pm - 05.00 pm Total Marks: 70	
Ins	truc	tions:	
	1.	Attempt any five 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) Redurization (ii) 12 D concept	
		(iii) Hedrogen Swell (iv) Screening of microorganism	
	(b)	List various chemical preservative. Discuss food preservation by specific use of suitable chemical preservative.	06
(b	(a)	Discuss role of microorganisms in spoilage of milk and milk products.	07
	(b)	Discuss various carbon sources used in fermentation media formulation OR	07
	(b)	Write name of organism, medium characteristics, process parameters apply in citric acid fermentation	07
Q.3	(a)	Classify canned foods based on acidity and explain their spoilage	07
	(b)	What is the application of gamma radiation in food preservations?	04
	(c)	Write brief account on various methods for inoculation development	04
Q.3	(a)	List various physical preservation methods of food. Discuss high temperature preservation of food.	05
	(b)	Discuss various microbial spoilage conditions in fruits and vegetables	05
	(c)	State major criteria to be considered in designing of typical fermenter	04
Q.4	(a)	List common pathogens responsible for food Bourne illness in human being	06
	(b)	Explain Botulism, Staphylococcal Gastroenteritis and listeriosis. Discuss low temperature preservation of food techniques	04
	(c)	Explain general flow chart for product(s) recovery process from fermentation broth	04
(1	(a)	Explain production of vinegar (Acetic acid) by fermentation process	07
	(b)	Brief about use of sterilization in food industry	03
	(c)	Discuss filtration aids used in filtration technique in separation of biomass from fermentation broth	04
Q.5	(a)	Discuss major steps adopted in commercial production of bear?	06
	(b)	List four industrially important molds with their specific roles.	04
	(c)	Brief introduce spoilage of cereal grains and bakery products by microorganisms.	04
Q.5	(a)	State various techniques used for preservation of microbial culture for fermentation	06
	(b)	applications. What is food infection and intoxication? List various food borne pathogens. Discuss	08
	(~)	any four pathogens in detail.	33
