Seat No.: _____ *Enrolment No._____*

GUJARAT TECHNOLOGICAL UNIVERSITY

B.E. Sem-III Remedial Examination March 2010

Subject code: 131401 **Subject Name: Food Chemistry**

Date: 09 / 03 / 2010 **Time: 03.00 pm- 5.30 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)**	Write differences between saturated and unsaturated fatty acids	**05**
	(b)	Discuss the properties of carotenoids	**05**
	c)	Define the terms: Monolayer water, Myoglobin, Caramelization, Emulsifier	**04**
Q.2	**(a)**	What are the class-I and class-II preservatives? Explain class-I preservatives	**07**
	(b)	Define terms; Saponification, Rancidity, Rendering, Protein	**04**
		OR	
	(b)	Introduce term: Polymorphism of fat, Winterization, Hydrogenation of oil, PI value of Protein	**04**
	c)	Discuss outline classification of amino acids with example of each class	**03**
		OR	
	(c)	Describe bonds involve in protein quaternary structure formation	**03**
Q.3	**(a)**	Discuss various physical properties of lipid	**05**
	(b)	Give proteins classification with suitable examples	**05**
	(c)	Explain gel formation theories of proteins	**04**
		OR	
Q.3	**(a)**	Explain various methods of refining of oil and its important	**05**
	(b)	Explain factor affecting on solubility of proteins	**05**
	(c)	What is denaturation of protein?, explain factors responsible for denaturation	**04**
Q.4	**(a)**	Define food additives and explain the role food additives in food processing	**07**
	(b)	Discuss the physical properties of water	**04**
	(c)	Write the distinct measures to launch the food additive in the market	**03**
		OR	
Q.4	**(a)**	Define water activity and explain the relationship between water activity and moisture content of food	**07**
	(b)	Briefly explain amylose and amylopectin	**04**
	(c)	Which are the deficiency diseases of iron and what is the RDA of iron for pregnant woman?	**03**
Q.5	**(a)**	Enlist the important disaccharides and discuss their properties	**07**
	(b)	Write the nutritional significance of carotene	**03**
	(c)	Enlist the various bleaching agents and curing agents. Explain their role in foods	**04**
		OR	
Q.5	**(a)**	Which factors are responsible for increasing and decreasing the Ca absorption in the body	**05**
	(b)	Explain the changes took place in the carbohydrates while cooking	**05**
	(c)	Write short note on animal originated pigments	**04**

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