Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–III • EXAMINATION – SUMMER 2013

Subject Code: 131401 **Date: 31-05-2013**

Subject Name: Food Chemistry

Time: 02.30 pm - 05.00 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)**	Explain how food proteins are classified?	**07**
	(b)	Enlist animal originated pigments and explain any one in detail.	**07**
Q.2	**(a)**	Enlist the various methods of moisture estimation of foods and explain any one.	**07**
	(b)	Write the notes on following: (Any two) 1. Safety of food additives 2. Ideal characteristics of food additives 3. Complex polysaccharides	**07**
		OR	
	(b)	Explain the factors affecting the stability of chlorophyll with neat chemical structure.	**07**
Q.3	**(a)**	State the properties of following sugars: a) Fructose b) Galactose	**07**
	(b)	Describe physico-chemical properties of proteins.	**07**
		OR	
Q.3	**(a)**	Explain in detail the role of water in food systems.	**07**
	(b)	Give flow diagram for preparation of refined edible oil and describe various methods of oil extraction	**07**
Q.4	**(a)**	Write a detailed note on physical properties of lipids	**07**
	(b)	Describe the gel formation phenomena and theories of gel formation.	**07**
		OR	
Q.4	**(a)**	Draw a typical structure of protein and describe biological functions of food proteins.	**07**
	(b)	Give detailed classification of food lipids.	**07**
Q.5	**(a)**	What is water activity? Explain in detail the importance of water activity in foods.	**07**
	(b)	State the functions and sources of following minerals (Any two) a. Calcium b. Iron c. Copper	**07**
		OR	
Q.5	**(a)**	Explain the need of food additives as an ingredient in processed foods.	**07**
	(b)	Give the detail classification carbohydrates in detail with appropriate examples.	**07**

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