

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) **07**
1. Safety of food additives
2. Ideal characteristics of food additives
3. Complex polysaccharides
- OR**
- (b) Explain the factors affecting the stability of chlorophyll with neat chemical structure. **07**
- Q.3** (a) State the properties of following sugars: **07**
a) Fructose b) Galactose
(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) **07**
a. Calcium b. Iron c. Copper
- 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**
