

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-III • EXAMINATION – WINTER • 2014****Subject Code: 2131406****Date: 01-01-2015****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)** Draw a typical structure of amino acid and give different classes of amino acid based on nature of their functional groups. **07**
- (b)** Explain various method used to determine the moisture content of foods **07**
- Q.2 (a)** Describe the physical properties of lipids **07**
- (b)** Write a detailed note on types of water in food **07**
- OR**
- (b)** Explain the factors affecting the stability of anthocyanin. **07**
- Q.3 (a)** Differentiate between saturated and unsaturated fatty acids. Write a note on essential fatty acid. **07**
- (b)** Explain how chemical structure of water and ice affect on their properties? **07**
- OR**
- Q.3 (a)** State the biological functions of protein and lipids **07**
- (b)** What are different methods to control water activity of foods? Explain any one in detail. **07**
- Q.4 (a)** Write in detail about simple lipids. **07**
- (b)** Describe the classification of food proteins with suitable examples. **07**
- OR**
- Q.4 (a)** Enlist different types of food pigments and explain their role in food processing **07**
- (b)** Describe various levels of protein structure **07**
- Q.5 (a)** Define food additive and explain various functions of food additives. **07**
- (b)** Enlist various disaccharides and explain the structure and properties of any one disaccharide. **07**
- OR**
- Q.5 (a)** What do you mean by class-I and class-II preservatives? Explain class-I preservatives **07**
- (b)** What is polysaccharide? State various polysaccharides and describe any one of them **07**
