

GUJARAT TECHNOLOGICAL UNIVERSITY**BE SEM-III Examination May 2012****Subject code: 131401****Subject Name: Food Chemistry****Date: 11/05/2012****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) Briefly explain bleaching and maturation process of flour. **05**
 (b) Explain how chlorophyll gets degraded in foods. **05**
 (c) Introduce at least four physical characteristics of lipids. **04**
- Q.2** (a) Give classification of proteins with suitable example. **07**
 (b) Enlist various types of pigments and explain their role in food processing. **07**
- OR**
- (b) Explain in detail about carotenoids and their properties. **07**
- Q.3** (a) Enlist various minerals and state their deficiency diseases. **07**
 (b) Write a functions of proteins in human diet. **04**
 (c) Enlist impurities in crude oil extracted from oil bearing seeds and give method employed for removal of such impurities respectively. **03**
- OR**
- Q.3** (a) What is polysaccharide? Enlist various polysaccharides and explain any one in detail. **07**
 (b) Explain gel formation theories in protein denaturation. **04**
 (c) Enlist name of six amino acids with their respective functional group. **03**
- Q.4** (a) Define terms: i- Rancidity, ii-Amino Acids, iii- Saponification Value, iv- Protein denaturation, v-Essential fatty acids. **05**
 (b) Differentiate between saturated and unsaturated fatty acids. **05**
 (c) Write the functions of water in human body. **04**
- OR**
- Q.4** (a) Give classification of lipid with suitable examples. **05**
 (b) Discuss lipid derive (modified) products available in markets. **05**
 (c) Briefly explain flavouring agents and flavour enhancers. **04**
- Q.5** (a) Enlist different types of water present in food and explain the role of water in food system. **05**
 (b) What is water activity? Explain the relationship between water activity and shelf life of food. **05**
 (c) Explain the methodology to determine the moisture content of food by hot air oven method. **04**
- OR**
- Q.5** (a) Enumerate different types of disaccharides and explain any one in detail. **05**
 (b) Enlist different types of food additives and write their functions. **05**
 (c) Write the functions of amylose and amylopectin. **04**
