

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-III • EXAMINATION – WINTER • 2014****Subject Code: 131401****Date: 20-12-2014****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 the role of starch in processed food products. **07**
(b) Define proteins and describe various techniques used to determine molecular weight and homogeneity of proteins **07**
- Q.2** (a) Explain the criteria to select the food additives to be used in processed food products. **07**
(b) Explain the various functions of water in food system. **07**
- OR**
- (b) Give detailed classification of proteins with suitable examples. **07**
- Q.3** (a) Explain the various functions of food additives. **07**
(b) Give proper justification for the following statements **07**
1. Glucose is known as current carbohydrate coin of the body.
2. Invert sugar is used to retard crystallization in the food products.
- OR**
- Q.3** (a) Explain the structure of water and ice with its importance. **07**
(b) Explain the role of myoglobin in maintaining meat quality. **07**
- Q.4** (a) Explain the role of solutes in controlling the water activity of foods. **07**
(b) Write short notes (any two) **07**
1. Technology of juice clarification using food additives.
2. Complex polysaccharides.
3. Role of Ca in strengthening bones.
- OR**
- Q.4** (a) Explain the role of salt in preservation of foods. **07**
(b) Give the detail classification of pigments with suitable examples. **07**
- Q.5** (a) Describe the phenomena of protein gel formation with it's supporting theories **07**
(b) Explain various level of protein structures. **07**
- OR**
- Q.5** (a) Write in detail about simple lipids. **07**
(b) What is denaturation of protein?, explain factors responsible for denaturation and effects of protein denaturation **07**
