

GUJARAT TECHNOLOGICAL UNIVERSITY**B.E. Sem-Vth Examination December 2010****Subject code: 151401****Subject Name: Design & Formulation of Food****Date: 18 /12 /2010****Time: 03.00 pm - 05.30 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) Define following terms **04**
 1. Nutrition 2. Food exchange list 3. Restoration 4. Carbohydrates
- (b) Give scientific reasons **06**
 i. Proteins from animal origin are of high quality than proteins from plant origin
 ii. Milk is considered as almost complete food.
 iii. Whole wheat flour is more nutritious than white wheat flour
- (c) Write in short about the following: **04**
 (a) Intense sweetener (b) Protein quality parameters
- Q.2** (a) Write a note on wheat and rice based processed products. **07**
 (b) List relative percentage of fatty acids present in high PUFA containing vegetable oils and Explain role of PUFA including omega-3 fatty acids in preventing Cardio Vascular Disease/Coronary Heart Disease. **07**
- OR**
- (b) Write in detail nutritional requirement of preschool going children and adolescent. **07**
- Q.3** (a) Write in detail about digestible and non digestible carbohydrates in fresh fruits and vegetables **07**
 (b) Write various functional dairy ingredients and explain Bioactive peptide and CLA in detail. **07**
- OR**
- Q.3** (a) What are the developmental stages during a normal life cycle of an individual and give the specific nutritional requirement during each stage. **07**
 (b) Define convenience foods. Write advantage of convenience foods and role of processing techniques and packaging trends in preparation of convenience foods. **07**
- Q.4** (a) Explain in detail the principles of menu planning. **07**
 (b) List various Gastro-intestinal diseases. Explain causes and symptoms of various types of diarrhea and suggest diet for the same. **04**
 (c) Explain follow up formula/weaning food **03**
- OR**
- Q.4** (a) Write a note on egg white protein **07**
 (b) Write nutritional requirement and points to be considered in planning a diet for a diabetic patient. **07**
- Q.5** (a) Describe the nutritional value of legumes **07**
 (b) Explain in detail various immunological factors present in mother's milk **07**
- OR**
- Q.5** (a) Write in detail about microbial toxins found in food **07**
 (b) Define synbiotic food and explain health benefits of prebiotic and probiotic foods. **07**
