

GUJARAT TECHNOLOGICAL UNIVERSITY**B. E. - SEMESTER – VII • EXAMINATION – WINTER 2012****Subject code: 171401****Date: 26/12/2012****Subject Name: Food Packaging Technology****Time: 10.30 am - 01.00 pm****Total Marks: 70****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 (a)** Answer in brief:
 “Packaging is scientific and artistic segment of marketing.” Explain? **04**
 What are the problems associated wood as packaging material? **03**
- (b)** “Packaging means value addition for all stake holders.” For whom and How? **07**
- Q.2 (a)** What are the requirements for an ideal package? **07**
- (b)** Compare glass, paper and aluminum as packaging material for liquid food products in terms of compatibility, cost and environment friendliness. **07**
- OR**
- (b)** List the information required to develop a good package. **07**
- Q.3 (a)** Write short notes on-
 PET **04**
 Grease proof paper **03**
- (b)** Write anote on blister packaging. How it can be used in food packaging? **07**
- OR**
- Q.3 (a)** i. List basic types of metal plates used in food processing packaging. **03**
 ii. What are the things to be specified while placing the order for cans? **04**
- (b)** Write a note on biodegradable packaging. What are its limitations? **07**
- Q.4 (a)** Suggest and justify suitable packaging materials for
 Crisp fat rich cookies
 Acidic fruit juices
- (b)** Discuss possible hazards and suggest step by step suitable packaging material for a product having following characteristics: **07**
 Crispy, low moisture, high fat, well flavored, salty products
- OR**
- Q.4 (a)** Suggest and justify suitable packaging materials for **07**
 Freshly harvested litchi
 Ready to eat paranthas
- (b)** Discuss possible hazards and suggest step by step suitable packaging material for dairy products. **07**
- Q.5 (a)** Explain the different tests conducted for paper and paper board used for packaging. **07**
- (b)** An aluminum foil lined cylinder (56cm diameter and 80cm high) is used to fill the bulk fruit powder (particle density 800 kg /m³) with a porosity of 34%. If in one cylinder 10 kg extra powder is filled. Calculate the per cent increase or decrease in the porosity. **07**
- OR**
- Q.5 (a)** Describe the components and working of Form Fill and Seal machine **07**
- (b)** A CFB box has been designed for accommodating 5 kg apples with 30% porosity. If the same box is used to carry tomato with 50% porosity, find out how many more or less boxes will be required to carry 1200kg of tomatoes. If the true density of the apple to tomato is 1.2. **07**
