

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI • EXAMINATION – WINTER • 2014

Subject Code: 161405

Date: 03-12-2014

Subject Name: Milk and Milk Products Technology

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) Give the flow diagram for preparation of cheddar cheese and describe the steps ‘cheddaring’ and ‘curing’ in detail. **07**
- (b) What are special milks? Write the objectives and flow diagram for preparation of ‘sterilized milk’ and ‘flavoured milk’. **07**
- Q.2** (a) Describe spray drying as a milk drying system with respect to its **07**
i) Principle ii) Advantages and disadvantages iii) Atomization
- (b) Write short notes on **07**
i) Centrifugal cream separation method
ii) Tests for milk quality evaluation
- OR**
- (b) Write short notes on **07**
i) Types of cream
ii) Processed cheese
- Q.3** (a) What are the objectives of neutralization of cream during butter making? Explain the procedure for correct neutralization of cream. **07**
- (b) State the PFA (legal) standards for i) Whole Milk Powder ii) Skim Milk Powder **07**
- OR**
- Q.3** (a) Define butter. Discuss the following steps in butter preparation: **07**
i) Standardization of cream ii) Churning
- (b) Discuss the common defects in butter with their causes and prevention. **07**
- Q.4** (a) Describe the role of constituents in ice-cream. **07**
- (b) Define khoa according to PFA rules. Discuss the physico-chemical changes occur in milk on conversion into khoa. **07**
- OR**
- Q.4** (a) Briefly discuss the process of ice-cream preparation. **07**
- (b) Define Pasteurization of milk. Describe the different methods of milk pasteurization. **07**
- Q.5** (a) Explain the process of vanilla and chocolate flavour extraction from their beans. **07**
- (b) Describe the important physico-chemical properties of milk. **07**
- OR**
- Q.5** (a) Write short notes on **07**
i) Defects in ice-cream
ii) Types of frozen desserts
- (b) Discuss the factors affecting composition of milk. **07**
