

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2018****Subject Code: 2171403****Date: 26/11/2018****Subject Name: Milk & Milk Products Technology****Time: 10:30 AM TO 01:00 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) What are the objectives of addition of stabilizers and emulsifiers in ice cream preparation? **03**
- (b) Write a short note on 'Tests for quality evaluation of milk' **04**
- (c) What is Churning of cream? Write its importance and discuss the factors affecting churnability of cream. **07**

- Q.2** (a) What do you mean by abnormal milk? Explain with examples. **03**
- (b) What is processed cheese and how it is prepared? **04**
- (c) Explain the 'freezing' step in preparation of ice cream. **07**

**OR**

- (c) Explain the extraction process of vanilla and chocolate flavour. **07**
- Q.3** (a) State the principle and methods of cream separation. **03**
- (b) What are the advantages of preparation of homogenized milk? Explain the flow diagram of its preparation. **04**
- (c) Define Cheese and briefly describe the process of preparation of Cheddar cheese. **07**

**OR**

- Q.3** (a) Give the flow chart of butter preparation. **03**
- (b) Define the followings: **04**
- i) Recombined Milk ii) Toned milk iii) Colostrum iv) Kumiss
- (c) Describe cheese with respect to its: **07**
- i) Classification criterion ii) Composition and nutritive value

- Q.4** (a) State the role of NDDB in dairy development in India. **03**  
(b) Briefly describe the process of manufacture of shrikhand. **04**  
(c) Why the cream neutralize during butter preparation? Discuss the types of neutralizers to be added and correct procedure for neutralization. **07**

**OR**

- Q.4** (a) Write a short note on 'Ripening of cream' **03**  
(b) Discuss chhana with respect to its composition and process of preparation. **04**  
(c) Write short notes on: **07**  
i) FSSAI specifications for Butter  
ii) Judging and grading of butter

- Q.5** (a) State the FSSAI standards for ice-cream? **03**  
(b) Describe briefly the various milk drying systems. **04**  
(c) Discuss the factors affecting quality and quantity of milk obtained from source animal. **07**

**OR**

- Q.5** (a) Write a short note on 'Types of Ice-cream' **03**  
(b) Define Condensed milk and briefly explain the process of its production. **04**  
(c) Highlight the nutritional significance of milk and state the characteristics of the major constituents present in milk. **07**