	Utech
Name :	
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Invigilator's Signature :	

CS/B.Tech/FT(O)/SEM-5/FT-502/2012-13 2012

FOOD PROCESS TECHNOLOGY-III (DAIRY PRODUCTS)

Time Allotted: 3 Hours Full Marks: 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP - A

(Objective Type Questions)

1. Answer the following in brief :

 $10 \times 1 = 10$

- i) What are the bone-making constituents present in milk?
- ii) What is the specification of double-toned milk?
- iii) Milk is an oil-in-water type emulsion. (Write *True/False*)
- iv) What is the type of emulsion in milk
- v) The freezing point of milk is higher than that of water.

(Write *True / False*)

vi) What is the fat content of plastic cream?

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vii) Yoghurt may fail to set if infected with bacteriophage.

(Write True / False)

- viii) Is phosphatase present in UHT milk?
- ix) What is the constituent responsible for the grittiness of ice cream?
- x) Which has better shelf-life—Whole milk powder or skim milk powder?

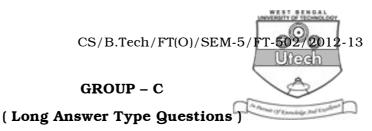
GROUP - B

(Short Answer Type Questions)

Write short notes on any *three* of the following. $3 \times 5 = 15$

- 2. Advantages of spray dried powder over the roller-dried one.
- The defects arising due to improper storage temperature of evaporated milk.
- 4. The factors influencing the body of butter.
- 5. Milk proteins.
- 6. CIP system in dairy.

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Answer any *three* of the following. $3 \times 15 = 45$

7. Discuss the different stages of cheese-making. What are the changes that occur during the curing of cheddar cheese? Discuss the factors which cause shrinkage in cheese.

5 + 7 + 3

- 8. Draw the flow diagram for the manufacture of ice cream. How can the textural defects in ice-cream be overcome? What are the advantages of using emulsifier in its manufacture? 6+6+3
- 9. How is skim milk produced by spray drying process? How is the powder made instantly soluble? What are the causes of lumpy powder? 6+6+3
- 10. Why is milk fermented? Discuss the process of manufacture of yoghurt. What are the changes occurred during such fermentation? 2 + 7 + 6
- 11. What is the importance of quality control in dairy industry? Discuss the controls to be adopted for packaging of milk. If coliform is detected in pouched milk, how will you detect the source of contamination? 3 + 7 + 5

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