



Name : .....

Roll No. : .....

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 × 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 ?



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.
3. 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.



**GROUP – C**

**( Long Answer Type Questions )**

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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