



(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 180610

Roll No.

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B. Tech.

(SEM. VI) THEORY EXAMINATION, 2014-15

DAIRY & FOOD ENGINEERING

Time : 3 Hours]

[Total Marks : 100

Note: The question paper is divided into three sections. Attempt each section.

SECTION-A

- 1 Attempt each short answer type question: (2×10=20)
- (a) Define pasteurization
 - (b) Define milk? Why milk is treated as complete food?
 - (c) Name any eight machines used for processing of milk.
 - (d) Write any eight properties of milk.
 - (e) What is the function of pulsator of a milking machine?
 - (f) What are Vacreators?
 - (g) Enumerate the main function of Homogenizer.
 - (h) What is Toned milk?
 - (i) For what purposes membrane separation is used?
 - (j) What do you mean by filtration?

SECTION-B

- 2 Attempt any three parts of the following: (3×10=30)
- (a) Why the composition of nutrients in the food products is essential parameter to save from deterioration?
 - (b) Discuss the unit operations of various dairy products and food processing system.
 - (c) Explain the biological method of dairy food preservation.
 - (d) Write an essay on the "Dairy development in India" in the current scenario.
 - (e) Describe step by step the working of HTST pasteurization system with the help of neat and labelled diagram.

SECTION-C

- 3 Attempt all parts of the following: (10×5=50)
- (a) What is refrigeration? Draw the refrigeration cycle of a compression refrigeration system and explain its working?

OR

- (a) What is the importance of heat exchangers in a dairy plant? Describe the different types of heat exchangers.
- (b) Describe the principle, construction and working of a cream separator?

OR

- (b) What is the function of butter churn? How it differs from butter worker? Clearly distinguish between them.
- (c) Explain the butter manufacturing with the help of neat flow chart.

OR

- (c) What do you mean by thermal processing of milk? Show with an example.
- (d) Explain the process of can washing in a rotary can washer with the help of schematic diagram.

OR

- (d) Describe the function of a common butter churn.
- (e) What do you understand by evaporation? Discuss the falling film evaporator with clean figure.

OR

- (e) What are characteristic features of a storage tank used for storing large volume of milk and milk products? Explain the advantages of a horizontal storage tank over a vertical storage tank.
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