

C 1179

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Name.....

Reg. No.....

**SIXTH SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION
MARCH 2021**

Food Technology

FTL 6B 16—DAIRY TECHNOLOGY

(2017 Admissions)

Time : Three Hours

Maximum : 80 Marks

Section A

Answer all questions.

Each question carries 1 mark.

1. Define specific gravity.
2. What is the chemical nature of cheese crystals ?
3. What is solid not fat in milk ?
4. Grainy nature of ghee is due to the lactose crystals. True or False.
5. Is a negative phosphatase test required for recombined milk ?
6. Due to the presence of fat in milk, density of milk is lower than water at room temperature. True or false ?
7. Standards for different types of milk vary across the country ?
8. Cheddar cheese requires strict temperature control during maturation.
9. Write down the temperature and duration of UHT milk process.
10. Milk naturally contains urea. True or false ?

(10 × 1 = 10 marks)

Section B

Answer at least four questions.

Each question carries 2 marks.

All questions can be attended.

Overall Ceiling 8.

11. All types of milk have same boiling point. Comment on the statement with reasons.
12. Are mixed and recombined milk the same ? If not, state the difference.

Turn over

13. State the difference between sterilization and pasteurization.
14. What is ice cream "overrun" ?
15. What does the ash content mean in clarified butter ?
16. In olden days, butter is churned from curd in the early morning. What is the scientific reason behind the timing of the process ?
17. How annatto is related to cheese ?

(4 × 2 = 8 marks)

Section C

Answer at least four questions.

Each question carries 8 marks.

All questions can be attended.

Overall Ceiling 32.

18. Write the solid not fat composition of homogenized, standardized, toned, full cream and double toned milk.
19. What is active culture in fermented dairy products? List at least three common ingredients in the active culture.
20. Draw a flow diagram for the production of whey protein powder from milk.
21. List any two enzymes naturally present in milk and their enzymatic action.
22. Briefly explain the changes in protein structure during curdling process.
23. Do you think, rate of cooling impacts ice cream consistency ? Briefly justify your answer.
24. Differentiate the process for production of cheddar cheese and cottage with flow diagrams.
25. Briefly explain the basic milk tests to determine its quality parameters.

(4 × 8 = 32 marks)

Section D

Answer any two question.

Each question carries 15 marks.

26. List the common defects in ice cream and briefly describe the reason behind the defects.
27. Compare the processing steps involved in the production of whole and skim milk powder with flow diagram.
28. Describe the steps involved in production of fermented milk drink in a glass bottle.
29. Explain the processing steps involved in frozen dessert production.

(2 × 15 = 30 marks)