

Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

SIXTH SEMESTER B.TECH DEGREE EXAMINATION (S), AUGUST 2023**FOOD TECHNOLOGY****(2020 SCHEME)****Course Code : 20FTT302****Course Name: Dairy Technology****Max. Marks : 100****Duration: 3 Hours****PART A*****(Answer all questions. Each question carries 3 marks)***

1. Write the effect of pH on the milk quality.
2. Describe the procedure of quality evaluation of milk before processing.
3. Explain the objective of milk pasteurization.
4. Explain the working of a plate heat exchangers.
5. Write a note on the effect of homogenization of milk.
6. Mention any two methods to determine the efficiency of homogenization process.
7. What is Centrifugation? Write their application in dairy engineering.
8. Write a note on the major application of Ultra filtration.
9. Draw the neat sketch of drum dryer with their parts.
10. Write the importance of steps in butter manufacturing.

PART B***(Answer one full question from each module, each question carries 14 marks)*****MODULE I**

11. a) Write the composition of milk and its types. (7)
b) Explain the physical, Chemical and Thermal Properties of milk. (7)

OR

12. Explain the effectiveness of CIP in dairy plant with its types. (14)

MODULE II

13. Explain the principle of heat exchangers with its types and merits and demerits. (14)

OR

14. Discuss the working procedure of High Temperature Short Time pasteurization with its advantages and disadvantages. (14)

MODULE III

15. Mention the different forms of fat globules in milk and explain the stages of homogenization with a neat sketch. (14)

OR

16. a) Discuss the importance of homogenizer. (7)
b) Explain the different types of homogenizer. (7)

MODULE IV

17. a) What is Ultra filtration? Explain its principle and process in dairy industry. (7)
b) Discuss the working principle of Bactofuge treatment. (7)

OR

18. Discuss the Centrifugation process of milk and its effect on fat percentage in cream. (14)

MODULE V

19. Explain in detail process of spray drying. Discuss Instantization process to make dry powder instant soluble. (14)

OR

20. Define the term overrun. Explain the principle and working of any four types of freezers that can be used in ice-cream sector. (14)
