

Register No.: ..... Name: .....

## SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

**SIXTH SEMESTER B.TECH DEGREE EXAMINATION (R), MAY 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. What are the different methods available for cooling and storage of milk? Explain the principle of any one.
2. List out any three variables influencing the effectiveness of cleaning and also explain the nature of influence.
3. What is the effect of heat regeneration in a pasteurizer? How will you quantify it?
4. Give a schematic representation of air controlled HTST pasteurizer.
5. What are the effects of homogenization on the quality of milk.
6. How can you quantify the efficiency of homogenization process in dairy plant?
7. What are the limiting factors affecting for the usage of electro dialysis in dairy Processing?
8. How will you quantify the clarification efficiency?
9. Describe the effect of agglomeration in skimmed milk powder.
10. Define overrun. Explain its importance.

### PART B

*(Answer one full question from each module, each question carries 14 marks)*

#### MODULE I

11. a) What are the important physicochemical properties of milk that determine its quality? (9)  
b) Describe the various factors affecting the quality of milk. (5)

**OR**

12. Explain the need, design and working of CIP systems in dairy industry. Also explain the types. (14)

#### MODULE II

13. a) Explain the principle and working of holding pasteurizer. (7)  
b) What is the importance and principle of vacreator in dairy (7)

industry?

**OR**

14. What is UHT processing? What are the important heating methods that followed in a UHT processing? (14)

**MODULE III**

15. a) What is homogenization? Explain the importance of homogenization in dairy industry. (7)  
b) Explain the major theories for the basis of homogenization process. (7)

**OR**

16. With the help of a neat schematic sketch explain the working of a homogenizer. Also explain various stages of homogenization. (14)

**MODULE IV**

17. a) Describe the process and effect of reverse osmosis plant in dairy industry. (7)  
b) Explain the construction and working of bactotherm process. (7)

**OR**

18. Explain the working of centrifugal separators with neat diagrammatic representation. (14)

**MODULE V**

19. What is the importance of atomization in spray dryer? Also explain the various methods of atomization. Also represent the working pattern of a spray drier with the help of a diagrammatic representation. (14)

**OR**

20. a) Explain the importance of pressing in cheese manufacture with the types of press. (7)  
b) Elaborate the production of paneer in dairy industry. (7)

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