

Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

FIFTH SEMESTER B. TECH DEGREE EXAMINATION (S), FEBRUARY 2024**FOOD TECHNOLOGY****(2020 SCHEME)****Course Code: 20FTT301****Course Name: Food Process Engineering****Max. Marks: 100****Duration: 3 Hours****PART A*****(Answer all questions. Each question carries 3 marks)***

1. Define Pasteurization.
2. Differentiate Z and D Value.
3. State Kick's Law.
4. Explain the importance of homogenization.
5. Define COP.
6. Draw a plot of drying rate vs drying time.
7. What are the physiochemical changes happening during baking process?
8. What is the significant role of roasting in food industry?
9. Explain the principle of high-pressure processing.
10. Differentiate Ohmic heating and RF heating.

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

11. a) What is meant by LTLT pasteurization and how are they done? (6)
- b) What are the important properties to be considered while selecting raw materials for a food industry? (8)

OR

12. Diagrammatically explain different cleaning methods in the presence of moisture for food processing. (14)

MODULE II

13. a) Explain the construction, working of a homogenizer and its application in size reduction. (8)
- b) Distinguish between Kick's law and Rittinger's law of size reduction. (6)

OR

14. Explain the importance and applications of emulsifiers in food industry. (14)

MODULE III

15. With schematic diagram explain the working of a spray dryer. (14)

OR

16. Distinguish between VA and VC refrigeration systems. (14)

MODULE IV

17. a) Explain different types of frying and its importance in food industry. (7)

- b) Explain the physiochemical changes happening during frying process. (7)

OR

18. a) Explain the different stages of baking. (7)

- b) Elaborate on the baking process carried out in food industry. (7)

MODULE V

19. a) Elucidate the effects of RF heating in food processing. (8)

- b) What is the effect of high-pressure processing in inactivating the microorganism and increasing the shelf life? (6)

OR

20. Explain the applications of single screw, twin-screw extruders in food Industry. (14)
