

Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

SEVENTH SEMESTER B.TECH DEGREE EXAMINATION (R), DECEMBER 2023

FOOD TECHNOLOGY

(2020 SCHEME)

Course Code : 20FTT401

Course Name: Food Processing and Preservation

Max. Marks : 100

Duration: 3 Hours

PART A

(Answer all questions. Each question carries 3 marks)

1. Fermentation is a food processing technique which involves the application of microorganisms. Justify the statement.
2. State the principles of food processing and preservation.
3. Outline the process of canning.
4. Find the differences between CAP, MAP & Vacuum Packaging.
5. List out the traditional methods of drying in food processing and preservation.
6. List out the applications of osmotic dehydration in food processing and preservation.
7. State the general principles of membrane processing.
8. Find the limitation of freeze concentration in food processing.
9. Explain the process of pulsed electric field.
10. Outline any 3 advantages and disadvantages of ohmic heating.

PART B

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

MODULE I

11. a) Discuss about the historical developments happened in the area of food processing and preservation. (7)
b) Relate the historical developments with recent scope of food processing with suitable examples. (7)

OR

12. a) Explain the types and role of major food additives in food industry. (10)
b) Identify the process of fixing permissible limits and regulations of food additives. (4)

MODULE II

13. a) Explain any two heat processing and preservation methods used in food industry. (8)
b) Compare the methods of roasting and frying and its applications. (6)

OR

14. a) Outline the applications of processing and preservation by low temperature. (4)
b) Explain the mechanism of preservation by freezing and refrigeration. (10)

MODULE III

15. a) Discuss the role of water activity in the process of drying. (4)
b) Describe the factors affecting and drying and also explain the changes involved by the drying action in food substances. (10)

OR

16. a) Explain any two novel drying techniques with advantages and disadvantages. (10)
b) Outline the process of microwave drying in food processing. (4)

MODULE IV

17. a) Differentiate between single-effect-evaporator and multiple-effect-evaporator. (6)
b) Describe the classification of membrane processing techniques. (8)

OR

18. a) Compare Nano filtration, ultra-filtration and micro filtration. (4)
b) Explain the applications and principles of freeze concentration. (10)

MODULE V

19. a) Outline the principles of microbial and enzymatic inactivation in novel food processing technologies. (5)
b) Explain any novel food processing technology with advantages and disadvantages. (9)

OR

20. a) Explain the microbial inactivation mechanism of pulsed electric field (6)
b) Microorganisms should not be able to jump over all hurdles present in the food product. Support the statement with suitable justification. (8)
