

Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

THIRD SEMESTER B.TECH DEGREE EXAMINATION (R,S), DECEMBER 2023**FOOD TECHNOLOGY****(2020 SCHEME)****Course Code : 20FTT203****Course Name: Food Microbiology****Max. Marks : 100****Duration: 3 Hours****PART A*****(Answer all questions. Each question carries 3 marks)***

1. List the different bacterial genera normally associated with food
2. What are the extrinsic factors affecting food spoilage
3. List out the various types of milk spoilage and the associated microorganisms.
4. Differentiate between food infection and food intoxication
5. Discuss the principle involved in Limulus Amoebocyte Lysate (LAL) test
6. Give an account on the working principle of biosensors
7. Define hazard. What are the types of hazards?
8. State the objectives of FSSAI
9. Define fermentation and give examples of fermented foods
10. Give a detailed account on probiotics

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

11. a) Explain the different phases of growth curve with the help of a neat and labelled diagram (7)
- b) Describe Phase contrast microscopy with a neat and labelled diagram (7)

OR

12. a) Describe fluorescent microscope with a neat and labelled diagram (7)
- b) Explain the important methods used for preservation of pure cultures (7)

MODULE II

13. a) Explain the microflora associated with meat and their spoilage potential. (7)
- b) Describe botulism and the methods and precautions for the (7)

prevention of its outbreak

OR

14. a) Explain the microflora associated with vegetables and their spoilage potential (7)
b) Give an account of the microbial toxins in food (7)

MODULE III

15. a) Explain flow cytometry and discuss the working principle of flow cytometry (7)
b) Illustrate the steps in Polymerase Chain Reaction (PCR) (7)

OR

16. What is ELISA? Discuss its types, procedure and applications (14)

MODULE IV

17. Explain the steps involved in HACCP implementation with a flow diagram (14)

OR

18. a) Elucidate the major Good Manufacturing Practices (GMPs) for a food establishment (7)
b) Explain the components and purpose of microbiological criteria for foods (7)

MODULE V

19. a) Explain various microbial enzymes in Food Processing (8)
b) Summarize production of yoghurt with a flow chart (6)

OR

20. a) Give a detailed account on beer fermentation (8)
b) Summarize vinegar fermentation with a flow chart (6)
