

Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

THIRD SEMESTER B.TECH DEGREE EXAMINATION (S), FEBRUARY 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. Compare and contrast the principles and applications of bright field and dark field microscopes.
2. Differentiate cryopreservation and lyophilization techniques for maintenance of pure cultures.
3. Comment on the mycotoxins as agents of food poisoning.
4. Explain food intoxication with suitable example.
5. Briefly outline any one chemical method employed for enumeration of microorganisms in food.
6. What are biosensors? Outline the working and applications.
7. Briefly summarize the major health hazards associated with food.
8. What are the consequences of Good Manufacturing Practices violations?
9. Explain alcoholic fermentation.
10. Define the term probiotics and explain the applications.

PART B

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

MODULE I

11. a) Illustrate any three methods for isolation of pure cultures (7)
b) Briefly explain the phases of growth curve detailing the characteristics of each phase. (7)

OR

12. a) Explain the principle, working and applications of various types of Electron Microscopes. (7)
b) Briefly outline the factors affecting the spoilage of food. (7)

MODULE II

13. a) Explain Botulism – causative agent, types and preventive measures (7)

adopted

- b) Elaborate the spoilage of meat and meat products by microorganisms (7)

OR

14. a) Briefly explain any 4 food borne diseases caused by microorganisms. Enlist the measures you would adopt to prevent it. (8)
- b) Explain the spoilage of fruits and vegetables (6)

MODULE III

15. a) Explain the principle, procedure and applications of major immunological methods for the identification of microflora in food. (7)
- b) Illustrate the methods for identification of bacterial toxins in food. (7)

OR

16. a) What is Standard plate count (SPC)? Illustrate the major techniques used in SPC for identification of food microbes. (10)
- b) Explain the principle and applications of Fluorescence-activated cell sorting (FACS). (4)

MODULE IV

17. a) What do you understand by the term HACCP? Enlist the principles, requirements and benefits of HACCP. (7)
- b) Explain the codes of Good Manufacturing Practices (GMP) (7)

OR

18. a) Give a detailed account on microbial quality assurance systems followed in food industry (14)

MODULE V

19. a) Discuss any 2 fermented vegetables and their benefits. (7)
- b) Briefly outline the role of any 3 microbial enzymes in food industry. (7)

OR

20. a) Give a detailed account of vinegar fermentation. (8)
- b) Briefly explain any 3 cereal based fermented foods. (6)
