Register No.: …… Name: ……..

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

THIRD SEMESTER B.TECH DEGREE EXAMINATION (Regular), FEBRUARY 2022

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. Write the scope of food microbiology.
2. Define bacterial growth curve and list the phases of the bacterial growth curve?
3. Write the name of the spoilage organisms associated with meat and meat products?
4. List out the major health hazards associated with food and what are the primary sources related to microorganisms with food poisoning?
5. Describe the principle and applications of RIA.
6. Differentiate between quantitative and qualitative methods for enumerating microbes in food.
7. List out any 3 food regulatory systems and their importance in maintaining food quality and safety.
8. What is the importance of HACCP in food industries?
9. Define probiotics? List out the foods that contain probiotics.
10. Write the desirable qualities for effective microorganisms in industrial use.

PART B

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

MODULE I

11. a) Explain in detail on Light Microscopy and Electron Microscopy. (7)
    b) What the methods used for isolation of microbes? Explain the pure culture methods. (7)

OR

12. a) Illustrate the contributions of any three pioneers in the field of food microbiology. (7)
    b) Elaborate the factors responsible for spoilage of foods. (7)

MODULE II

13. a) What are the general types of microbial spoilage occurred in fruits and vegetables? (7)
    b) Give an account on food borne diseases and elaborate on any three. (7)

OR

14. What are mycotoxins. Give an account of its classification and write about its impact and preventive measures? (14)

MODULE III

15. a) Explain how flow cytometry is used in detecting and characterizing of microorganisms. (7)
    b) Explain about any two quantitative methods are used for enumeration of microorganisms. (7)

OR

16. a) What is ELISA? Detail on indirect ELISA and its application. (7)
    b) Elaborate the applications of biosensors in microbiological analysis. (7)

MODULE IV

17. What is GMP? Enumerate the requirements, principles and activities. (14)

OR

18. Discuss the principles and prerequisites for HACCP. (14)

MODULE V

19. Elaborate the applications of any 6 enzymes in food industry. (14)

OR

20. a) Write about the production of any 2 fermented milk products. (7)
    b) Explain the fermentative production of beer. (7)

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