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**St Aloysius College (Autonomous)
Mangaluru**

Semester IV – P.G. Examination - M.Sc. Biotechnology

ST.ALOYSIUS COLLEGE

April - 2025

PG Library

MANGALORE-575 001

FOOD BIOTECHNOLOGY

Time: 3 Hours

Max. Marks: 70

Note: Draw neat labeled diagrams/schematic sketches/structures wherever necessary.

I. Write short notes on any FIVE of the following: (5x3=15)

1. How would you apply chemical evaluation techniques to assess the quality of a food product?
2. How does the Codex Alimentarius contribute to ensuring food safety and quality?
3. Explain Maillard reaction and give few examples.
4. What are microbial toxins? How do you classify them?
5. What is the primary purpose of food preservation by dehydration?
6. Discuss on pasteurization of foods as a preservation technique.
7. How do light intensity, temperature and pH influence the growth of Spirulina in a cultivation setup?
8. Identify one critical microorganism responsible for the fermentation of soy sauce and write a note on koji preparation.

II. Write explanatory notes on any FIVE of the following: (5x5=25)

9. Assess the effectiveness of using prebiotics and probiotics in dietary interventions for better health.
10. Discuss the structure and functions of FSSAI.
11. Describe the process of enzymatic browning in food.
12. How to control the mold during handling and processing of vegetable and fruits?
13. Describe canning as a method of preservation of food.
14. Compare and contrast blanching with alternative method of food preservation such as freezing.
15. Explain the process of Swiss cheese preparation.
16. Explain the steps involved in the manufacture of wine.

III. Answer any THREE of the following: (3x10=30)

17. Compare detection methods for adulteration in various food types, evaluating their effectiveness.
18. Elaborate on the factors affecting growth of microorganism in food leading to spoilage.
19. Mention the different types of food additives and write a note on E number.
20. Provide a comprehensive overview of the traditional method of miso production, detailing each stage and key ingredients.
21. Explain the method of manufacture of Beer.
