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**St Aloysius College (Autonomous)
Mangaluru**

Semester III – P.G. Examination – M.Sc. Food Science and Technology

December -2022

FOOD MICROBIOLOGY

Time: 3 Hours

Max. Marks: 70

I. Answer any SIX of the following

(6×3=18)

1. State the Koch's postulate.
2. Classify microorganisms on the basis of carbon source requirements.
3. Write a note on food -borne illness by Viruses.
4. Mention the measures taken to prevent microbial food poisoning.
5. List any four major recent food borne outbreaks.
6. What are the microbiological criteria for foods such as Meat?
7. Which are major food control enforcement and control agencies?

II. Answer any FOUR of the following

(4×7=28)

8. Explain the different types of sterilization techniques used in microbiology
9. Explain the growth curve of bacteria. Add a note on the nutritional factors influencing the growth of microorganisms.
10. Discuss about theories of biogenesis.
11. Discuss on application of HACCP in Food industry.
12. Indicate the prescribed standards of microbial quality for processed cereals and fish.

III. Answer any TWO of the following

(2×12=24)

13. Explain in detail about isolation of Microorganisms and write a note on detection of microorganisms by any two immunological methods.
14. Discuss the importance of the indicator organism to maintain food safety.
15. Discuss about food borne poisoning, Infections and Intoxications caused by any three Bacterial agents.

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**Semester III – P.G. Examination – M.Sc. Food Science and Technology
December - 2022**

NUTRACEUTICALS AND FUNCTIONAL FOODS IN HUMAN HEALTH

Time: 3 Hours

Max. Marks: 70

I. Answer any SIX of the following**6 × 3 = 18**

- 1 Write on the role of Vitamin C as antioxidant.
- 2 Write the classification of functional food with examples.
- 3 Write the different types and sources of carotenoids.
- 4 Differentiate nutraceuticals and functional foods with example.
- 5 List the pro - angiogenic nutraceutical compounds and mention their mechanism of action.
- 6 Which two bacterial strains are prominently used in probiotics supplements and why?
- 7 Write the three types of nutrients gene interaction.

II. Answer any FOUR of the following**4 × 7 = 28**

- 8 Explain the worldwide regulatory acts and issues for nutraceuticals.
- 9 Discuss the concept of developing the functional foods.
- 10 Explain about role of nutraceuticals and functional foods in prevention of Cancer.
- 11 Discuss the recent advances in probiotics supplements.
- 12 Explain the structure, sources, and role of phytosterol in human nutrition.

III. Answer any TWO of the following**2 × 12 = 24**

- 13 Discuss in detail about types of prebiotics and their health benefits.
- 14 Discuss in detail about management of CVD and High Cholesterol with functional foods.
- 15 Discuss in detail about processing of bioactive compounds.