



**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**

**M.Sc. DEGREE EXAMINATION – FOOD CHEMISTRY AND FOOD PROCESSING**

FIRST SEMESTER – NOVEMBER 2016

**FP 1809 - FOOD MICROBIOLOGY**

Date: 09-11-2016  
Time: 01:00-04:00

Dept. No.

Max. : 100 Marks

**Part A**

**Answer ALL the questions.**

**10 x 2 =20 marks**

1. Give the difference between thermophilic and psychotropic bacteria.
2. What is BOD?
3. List any four organisms that cause spoilage in fruits and vegetables.
4. What is food bio deterioration? Give two examples of highly perishable foods.
5. Define mycotoxins and mycotoxicosis.
6. Define food borne outbreak and incubation period.
7. List the benefits of fermented food.
8. Define starter cultures.
9. Name the starter culture employed in the following food fermentation  
i) Alkaline fermentation ii) Sauerkraut iii) Bread iv) Ascorbic acid.
10. What are bio gums?

**Part B**

**Answer ANY EIGHT questions.**

**8 x 5= 40 marks**

11. Explain the bacterial growth process.
12. Describe the oxygen and light requirements for growth of microorganisms.
13. Elaborate on binomial nomenclature of microorganisms.
14. Write short notes on specific spoilage organisms.
15. Discuss microbial spoilage of milk.
16. Differentiate between foodborne infection and food intoxication.
17. Discuss the role of viruses in food borne infections.
18. i. How are starter cultures classified?  
ii. Discuss the role of starter culture in lactic acid formation.
19. Briefly discuss yeast as biological leavening agents.
20. How do LAB bacteria help in yoghurt preparation?
21. Discuss mushroom cultivation.
22. Describe the microbiology of beer fermentation.

**Part C**

**Answer ANY FOUR questions.**

**4 x 10 = 40 marks**

23. Elaborate on five major sources of microbial contamination in foods.
24. Discuss water activity, acidity and nutrients as important factors for microbial growth.
25. What are the types of spoilage reactions that occur in food?
26. Describe the characteristics of five common food borne diseases of bacterial origin.
27. i. Elaborate on fermentation biochemistry. **(8 marks)**  
ii. Differentiate between natural and controlled fermentation. **(2 marks)**
28. Give a detailed account on the microbiology of vinegar production.

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