

Register Number:

Date:

**ST. JOSEPH’S COLLEGE (AUTONOMOUS), BENGALURU-27**

**M.Sc. MICROBIOLOGY - II SEMESTER**

**SEMESTER EXAMINATION- APRIL 2019**

**MB 8418 - Food Microbiology**

**Time: 2 1/2 hours Max Marks: 70**

This paper contains **1** printed page and **4** parts

1. **Answer any Five of the following 5X3=15**
2. Define Hurdle effect with example.
3. Comment on lactic acid starter cultures.
4. Define prebiotics, probiotics and synbiotics.
5. What are Aflatoxins? Mention the types and their sources.
6. Comment on ISO 22000.
7. What are indicator organisms? Give 2 examples.
8. List the sources of microorganisms in milk.
9. **Answer any Five of the following 5X5=25**
10. Write a short note on viral gastro enteritis.
11. Define water activity. How does it influence microbial growth on food?
12. Discuss the impact of normal gut flora on human health.
13. Explain Spiral plater technique and Micro colony DEF techniques.
14. Discuss the role of coliphages as indicator organisms.
15. Mention the different types of packaging materials used in food industry and their advantages.
16. Discuss the benefits of nutraceuticals.
17. **Answer any Two of the following 2X10=10**
18. Explain the fermentative processing of cocoa.
19. (a) List the seven principles of HACCP and its applications.(5)

(b) Brief out on the spoilage of bread and mention the organisms associated with it*.* (5)

1. Elaborate the food borne illness caused by *Clostridium botulinum*.
2. **Answer the following 1X10=10**
3. State whether the following statements are correct or incorrect and justify your answer.
4. Canned food should not be eaten if the can is swollen and bulging
5. Pasteurization of milk kills all microbes by rapidly heating milk till it boils and allowing it to cool slowly.
6. Fermentation is a method of food preservation that relies on keeping food in an alkaline environment.
7. Salting is a chemical method of food preservation that rely on soaking food in a weak solution of salt.
8. “Lactose free is not dairy free”.