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| **ST. JOSEPH’S COLLEGE (AUTONOMOUS), BANGALORE-27** |
| **M.Sc. MICROBIOLOGY - II SEMESTER** |
| **SEMESTER EXAMINATION: APRIL 2017** |
| **MB 8416 – Food Microbiology** |
|  |  |  |  |  |  |  |
| **Time- 2 1/2 hrs** |  |  **Max Marks-70** |
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| **This paper contains 2 printed pages and 4 parts** |

1. **Answer any Five of the following 5 x 3 = 15**
2. Name the pathogen associated with the following diseases:

 (a) Gray mold rot (b) Anthracnose (c) Watery soft rot

1. Define vat pasteurization and vacreation.
2. If a food is designated as commercially sterile, what does it mean? Which type of foods will have these labels?
3. Comment on LAB.
4. Write the properties of food borne viruses.
5. Illustrate the relationship between an indicator organism and the relevant pathogens in food.
6. What is OSRT?
7. **Answer any Five of the following 5 x 5 = 25**
8. What are the factors which influence the kind and rate of spoilage of fish?
9. Write a short notes on probiotics.
10. Explain the role of propionates and wood smoke in food.
11. Comment on foods for space.
12. Describe the pathogenesis of *Salmonella*.
13. What are the characteristics of ideal food safety indicators?
14. Explain Ice Nucleation Assay.
15. **Answer any Two of the following 2 x 10 = 20**
16. Explain different types of Intrinsic factors that affect the development of microbes in food.

MB-8416-A-17

1. (a) Tabulate different types of milk spoilage, associated microbes and the metabolic

 products associated with them. (5 marks)

(b)Write a short note on ochratoxins. (5 marks)

1. Write a detailed note on Cheese production.

**IV. Answer the following 1 x 10 = 10**

18. A young entrepreneur who wishes to start his own production unit of a commercial food product is looking for the quality control measures to be analysed and applied in his entire plant. What are the quality control measures and certifications you will suggest to him.