

TD164775A

Reg. No:

Name :

**MASTER'S DEGREE (C.S.S.) EXAMINATION, MARCH 2018
(2016 ADMISSION REGULAR)**

**SEMESTER IV- CLINICAL NUTRITION AND DIETETICS
ND4C16TM – FOOD MICRO BIOLOGY AND QUALITY CONTROL**

Time: Three Hours

Maximum Marks: 75

PART A

I. Answer any five questions. Each question carries 3 marks.

1. What is irradiation?
2. Explain biological spoilage in foods?
3. State the principles of culture media.
4. What is EPA?
5. What do you mean by single cell proteins?
6. Briefly describe the needs of good manufacturing practices.
7. What are the causes of spoilage in canned foods?

(5x3=15)

PART B

II. Answer any six questions. Each question carries 5 marks.

8. State the economic importance of micro-organisms.
9. How does intrinsic and extrinsic factors influence the growth of micro-organism?
10. Explain the types of food spoilage?
11. Write short note on the needs of personal hygiene in food industry.
12. Define canning. Explain various steps involved in canning process.
13. Discuss on types of spoilage in egg.
14. Detail on HACCP.
15. Which are the principal foods laws in India?
16. Differentiate prebiotics and probiotics with suitable examples.

(6x5=30)

PART C

III. Answer any two questions. Each question carries 15 marks.

17. Define food spoilage. Explain the sources and effects of spoilage in milk and milk products and its preventive measures.
18. What is food intoxication? Explain aetiology, clinical manifestation and preventive measures of food borne illness.
19. Describe various type of cultures used in microbiological analysis. Explain the procedures for isolation and identification of microorganism in foods.
20. Discuss in detail about the following
 - a) Principles of food preservation
 - b) needs of food preservation
 - c) Uses of chemical preservatives
 - d) Preservation by Low temperature

(2x15=30)