- xiv) Write a note on spoilage of fresh fish.
- xv) Write a note on mechanisms existing in plants to prevent microbial invasion.

## **SECTION-C**

**Note:**Long answer type questions. Attempt any three questions. 3x10=30

- Q.3 Explain determination and importance of F, Z and D values in thermal processing of foods.
- Q.4 Write a detailed note on historical developments in food microbiology.
- Q.5 Differentiate between food infection and food intoxication with suitable examples.
- Q.6 Write a detailed note on food born disease.
- Q.7 Write a note on micro flora of raw vegetables.

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## 3<sup>rd</sup> Sem. / Food Technology Subject : Food Microbiology

Time: 3 Hrs. M.M.: 100

## **SECTION-A**

**Note:** Very Short Answer type questions. Attempt any 15 parts. (15x2=30)

- Q.1 a) What is unripened cheese.
  - b) Define the term sterilization of a food product.
  - Name two extrinsic factor affecting microbial growth.
  - d) What do you understand by the term homogenized milk.
  - e) Define agar slant.
  - f) Define protein.
  - g) Define microbial contamination.
  - n) Define cereals.

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- i) Name two pathogens which spread through food products.
- j) What is MBR test.
- k) Define poultry.
- I) Define food spoilage.
- m) Define water activity.
- n) What is yeast.
- o) Name the bacteria responsible for converting milk into curd.
- p) Define pure culture.
- q) What is full form of TDT.
- r) What time temperature combination for milk pasteurization.

## **SECTION-B**

**Note:** Short answer type questions. Attempt any ten parts 10x4=40

- Q.2 i) Explain in brief physical anti-mictobial agents.
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- Discuss briefly the moulds associated with spoilage of fruits and fruit products.
- iii) Explain briefly factors affecting heat resistance of micro-organisms.
- iv) Write a note on contamination of vegetables by pathogenic bacteria.
- v) Differentiate between food infections and food intoxication.
- vi) Write a note on micro-flora of raw milk.
- vii) Write a note on mico-toxins.
- viii) How to minimize contamination of milk from handling equipments.
- ix) Write a note on sterilization of milk.
- Write a note on microbes responsible for food spoilage.
- xi) Write a note on microbial spoilage of ice cream.
- xii) Write a note on structure and composition of fish.
- xiii) Write a note on hurdle technology for preservation of foods.
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