

Theory Paper-VII Food and Dairy Microbiology

Marks: 100

Unit – I Industrial Food Fermentations

Starter cultures, their biochemical activities, production and preservation of the following fermented foods.

- a) Soya sauce fermentation by Moulds
- b) Fermented Vegetables- Saurkraut.
- c) Fermented meat – sausages
- d) Production and application of Baker's Yeast
- e) Application of microbial enzymes I food industries
- f)

Unit II Quality Assurance in Foods

Food borne infections and intoxication : bacterial with examples of infective and toxic types.

Clostridium, Salmonella, Shigella, Staphylococcus, Campylobacter, Listeria.

Mycotoxins in food with references to Aspergillus species.

Quality assurance: Microbiological Quality Standards of Food

Government regulatory practices and policies. FDA, EPA, HACCP, ISI

Unit – III Food Preservation Methods

Radiation- UV, Gamma and microwave .

Temperature

Chemical and naturally occurring antimicrobials.

Biosensors in Food industry.

Unit- IV Microbiology of cheese and beverage fermentation

Microbiology of fermented milk products (Acidophilus milk, Yoghurt)

Role of microorganisms in beverages – tea and coffee fermentations. Vinegar fermentation

Unit- V Advanced Food Microbiology

Genetically modified food , biosensors in food, applications of microbial enzymes in dairy industries (Protease, Lipases)

Utilization and disposal of dairy by – product- Whey.

Practical paper-VII

Marks-100

1. Production & estimation of Lactic acid by Lactobacillus species or Streptococcus species.
2. Extraction & estimation of diacetyl.
3. Saurkraut fermentation.
4. Isolation of food poisoning bacteria from contaminated foods, dairy products.