

FIRST ALLIED COURSE I : FOOD MICROBIOLOGY

Objectives

To enable students

1. Gain knowledge of the role of micro-organism in health and disease.
2. Understand the role of microbes in relation to food spoilage, food borne disease.

UNIT – I

Micro Organisms – Important in Food Microbiology

- a. Bacteria : General characteristics of bacteria, bacteriamorphology, cell structure, motility, nutrition reproduction and respiration.
- b. Viruses : General characteristics of viruses, viral diseases – symptoms, characteristics and control of viral diseases.
- c. Yeasts : General characteristics of yeasts. Economic importance of yeasts.
- d. Molds : General characteristics of molds Economic importance of molds.
- e. Protozoa : General characteristics of protozoa. Morphology and life history of entamoeba histolytica, plasmodium, protozoal diseases – Dysentery – Malaria.

Contamination of Foods

UNIT – II

Contamination from green plants and fruits, from animal, from sewage, from soil, from water, from air, during handling and processing.

UNIT – III

General principles underlying spoilage – chemical changes caused by micro-organisms. Fitness of unfitness of food for consumption causes or spoilage, classification of foods by case of spoilage factors, affecting the growth of micro-organisms in food factors affecting kinds and numbers of micro organization food, chemical changes caused by micro-organisms.

UNIT – IV

- a. Micro organisms in Food – Microbial food spilage, for borned diseases, food poisoning and food infection and their control.
- b. Contamination, Spoilage and preservation of
 - i. Cereal and Cereal products.
 - ii. Meat, fish and eggs.
 - iii. Fruits and Vegetables.
 - iv. Micro-organisms in milk Microbial role in Fermentation Microbial Spoilage of milk, prevention of control of spoilage pasteuization – methods, principles and advantages, Milk borne disease (Human and boving origin) and their control.

UNIT – V

- a. Soil Micro-biology – Role of micro-organism in N₂ cycle.
- b. Micro-organisms in water-Bacteriological examination of water, test for C. Coil, water borne diseases and their control.
- c. Sewage – Method of sewage disposal role of flies and other insects in the spread of disease.
- d. Micro-organisms in air – droplet infection and air-borne diseases and their control.
- e. Sterilization and disinfectants – principles and air-borne diseases and their control.

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5. Salle, A.J.1961 – Principles of Bacteriology McGraw Hill Book Company, London.
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7. Hobbs, B.C.-Food Poisoning and food hygiene Inter. Science publishing, New Delhi.