2.17 30717 TECHNOLOGY OF FOOD PRESERVATION

UNIT-1 FOOD MICROBIOLOGY

1.1 Principles of Food Preservation, microorganisms associated with foods- bacteria, yeast and mold,

1.2 Importance of bacteria, yeast and molds in foods.

1.3 Classification of microorganisms based on temperature, pH, water activity, nutrient and oxygen requirements, typical growth curve of micro-organisms.

1.4 Classification of food based on pH, Food infection, food intoxication, definition of shelf life, perishable foods, semi perishable foods, and shelf stable foods.

UNIT-2 FOOD PRESERVATION BY LOW TEMPERATURE

2.1 Freezing and Refrigeration :Introduction to refrigeration, cool storage and freezing, definition, principle of freezing, freezing curve, changes occurring during freezing,

2.2 Types of freezing i.e. slow freezing, quick freezing, introduction to thawing, changes during thawing and its effect on food.

UNIT-3 FOOD PRESERVATION BY HIGH TEMPERATURE

3.1 Thermal Processing, Commercial heat preservation methods: Sterilization, commercial sterilization, Pasteurization, and blanching.

UNIT-4 FOOD PRESERVATION BY MOISTURE CONTROL DRYING AND DEHYDRATION

4.1 Definition, drying as a means of preservation, differences between sun drying and dehydration (i.e. mechanical drying), heat and mass transfer, factors affecting rate of drying, normal drying curve, names of types of driers used in the food industry.

4.2 Evaporation, Definition, factors affecting evaporation, names of evaporators used in food industry.

UNIT-5 FOOD PRESERVATION BY IRRADIATION INTRODUCTION

5.1 Units of radiation, kinds of ionizing radiations used in food irradiation, mechanism of action, uses of radiation processing in food industry, concept of cold sterilization.

Reference Books:

1. B. Srilakshmi, Food science, New Age Publishers,2002
2. Meyer, Food Chemistry, New Age,2004
3. Bawa. A.S, O.P Chauhan etal. Food Science. New India Publishing agency, 2013
4. Frazier WC and Westhoff DC, Food Microbiology, TMH Publication, New Delhi, 2004