

Canning

FOOD PROCESSING INDUSTRY

Unit I - Food processing Methods

- Introduction to Food processing industry.
- Scope and importance of Food processed products.
- Processing equipments – Floor mill, Packing and Sealing machine, Balance

Unit – II - Cereal grain Processing

- Different grains suitable for Food processing.
- Primary processing of major cereals
- Milling of cereals
- Dry and Wet milling

Unit – III - Pulses and Legumes processing

- Principles of pulse milling
- Different methods of Dhal milling
- Milling of major legumes

Unit IV - Oil seeds Processing

- Properties and suitability of oil seeds for processing
- Methods of oilseed processing
- Terminologies in oil processing industry

Unit – V - Processing of Meat

- Selection of meat
- Preparation of meat cuts
- Preparation of meat
- Packaging of meat

Unit – VI - Processing of milk

- Pasteurization
- Sterilization
- Dehydration

Unit – VII - Special Milks

- Re- hydrated and De-hydrated milk
- Condensed milk, Toned milk and Flavoured milk
- UHT Milk
- Milk Products: Dahi, Chakka, Shrikhand, Butter, Butter Milk, Butter Oil, Lassi, Channa, Paneer, Rasogolla, Khoa, Basundi, Ice-cream and Cheese

Unit – VIII - Beverages

- Non-alcoholic beverages
- Alcoholic beverages
- Packaging material and methods
- Equipments used in beverage processing

FOOD PRESERVATION AND CANNING

Unit I - Introduction to food preservation.

- Concept, importance of food preservation.
- Principles of preservation
- Preservation techniques

Unit – II - Preservation by drying

- Concept, history
- Types of drying and dryers.
- Treatments prior to drying
- Preservation of fruits and vegetables by drying method

Unit – III - Preservation by use of high temperature

- Concept and importance.
- Various methods used – Pasteurization, Blanching, Boiling, Canning
- Effect of high temperature on food.

Unit – IV - Preservation by Low Temperature

- Concept, History
- Types of preservation methods by low temperature
- Different equipments used for preservation by low temperature
- Treatments prior to freezing

Unit – V – Food additives

- Chemical Preservative use of additives

Unit – VI – Preserved product (Fruits and Vegetables)

- Tomato ketchup, vegetable puree
- Juice, Fruit squash, Syrups, Cordials
- Jam, Jelly, Marmalade, Chutney, Murabba, Candy, Pickle,

Unit – VII - Fruits and Vegetables Cookery

- Colour pigments in Fruits and vegetables
- Effect of heat, acids and alkali on Fruits and vegetables
- Changes during cooking and storage
- Flavour used in fruits and vegetables products their types synthetic and natural flavour

Unit – VIII – Canning of fruits, Vegetables and other food

- Types of container, cushioning material, vacuum packing, cold storage, and poly shrink packing
- Introduction to microbiology related with food spoilage

NUTRITION

Unit – I - Introduction to Nutrition

- Definition of nutrition, nutrients, RDA
- Classification of nutrients (Macro, Micro)

Unit – II - Macro nutrients (Carbohydrates, Proteins, Fats)

- Classification, Sources
- Functions, RDA
- Deficiency, excess

Unit – III - Micro nutrients (Vitamins and Minerals)

- Classification, Sources
- Functions, RDA
- Deficiency, excess

Unit – IV - Water

- Composition, Sources, Classification
- Functions, RDA
- Deficiency, excess

FOOD SAFETY, QUALITY CONTROL AND WASTE MANAGEMENT

Unit – I - Introduction to Quality Control in the food industry

- Sampling of Food
- Sampling Methods

Unit – II - Standard tests for quality assessment

- Physical Tests
- Chemical tests
- Microbiological tests
- Sensory analysis

Unit – III - Waste Management in Food Industry

- Types of waste generated: non-degradable & biodegradable wastes
- Methods of utilizing wastes to make value added products
- Waste storage and disposal methods
- Storage and disposal of liquid and gaseous waste- land-filling, burial, incineration, recycling, biological treatment of food industry wastes.
- Storage and disposal of liquid and gaseous waste

Unit - IV - Food Laws and Standards

- Existing food laws and standards in India
- Concept and application of ISO and HACCP
- ECA (Essential Commodity Act)
- FSSAI Regulation

Unit - V - Hygiene and sanitation

- Personal hygiene
- Sanitation of equipments and production area
- Pest Control