

III HOME SCIENCE GROUP

(i) TRADE : FOOD PRESERVATION

PAPER-I FUNDAMENTAL OF FOOD PRESERVATION THEORY

Time : 2 hrs

Theory : 30Marks

CCE : 10Marks

Practical : 50 Marks

Total : 90Marks

Food

Definition, Classification, Functions of Food, Basic Food Groups and Sources and Functions of Various Nutrients.

Food Preservation Industry

Need, Future Scope and Role in the Economy of Country with Special Reference to Punjab, Contribution of Seasonal Crops in Economy of Punjab, Processing of Seasonal Fruits and vegetables - Guava, *Kinoo*, Potato, Onion etc, Role of Food Processing in Raising the Living Standard of People, Scope and Present Status of Food Processing Industry in Punjab.

Food Processing

Effects of Processing and Storage on the nutritive Value, Colour, Appearance, Texture, Flavour and Overall Acceptability of Foods.

Post-Harvest Process

Post Harvesting Processes Fruits and Vegetables - Surface Coating, Low Temperature, Maturity and Ripening and Deep Freezing, Processing and Storage of Fruits and Vegetable at Domestic and Commercial Level, Packaging and Refrigeration of Chopped Vegetables at Small Scale.

Food Additives

Properties and Uses of Spices, Preservatives, Flavours and Colors.

Equipments

Simple Equipment and their use - Thermometer, Gelmeter, Hygrometer, Salinometer and Repractameter , Hydrometer

Laboratory Processes

Simple Laboratory Processes in Food Industries- Pasteurization, Homogenization, Filtration, Distillation, Evaporation, Condensation.

Power of Hydrogen (pH)

Nutrition, Meaning, Effect, Mode of Detection, Balance, Measuring Scale and its Role in Food Preservation.

FUNDAMENTAL OF FOOD PRESERVATION

Time: 3 hrs

PRACTICAL

Marks : 50

- Traditional, common, advance tools of weights and measurement on demosaic level and commerciallevel.
- Make a conversions list of measuring tools.- measuring cup andspoons.
- Use of simple equipment used in the food industry such as thermometer, gel-meters, hygrometer, refractometer andsalinometer.
- Use of simple equipment used in the food industry such as cutlery, crockery, hollowware, chinaware etc.
- Simple processes like distillation, evaporation, condensation, pasteurization and homogenization.
- List of perishable and non perishable fruits andvegetables.
- Methods of increasing shelf life of perishable fruits and vegetables foods by surface coating and lowtemperature.
- Report on Market surveys - type of food available, prices, handling techniques (container, bags etc.) twice in amonth.
- Preparation and standardization of normal solutions forcanning.
- Determination of acidity and alkalinity bypH.
- Visit to orchard/ market to observe stages of maturity of locally grown vegetables and fruits and a make a report based onobservations.

PAPER-II FOOD MICROBIOLOGY AND QUALITY CONTROL
THEORY

Time : 2 hrs

Theory : 30Marks

CCE : 10Marks

Practical : 50 Marks

Total :90Marks

Food Micro Organism

Defination,Types,Mould, Yeast & Bacteria and their Advantage and Disadvantages with reference to Food.

Food Spoilage

Meaning, Physical, Microbial and Enzymatic Changes in Food.

Contamination

Meaning,Types,Cause, ,Control of Contamination in Preserved Foods.

Food Poisoning

Definition, Types, Causes and Control, difference between Spoilage and Poisoning.

Food Quality

Meaning,Attributes, Evaluation,Quality Control Methods, System and Scope.

Food Standards & Specifications

Food Laws Governing FPO, MFPO, PEA, ISI, AGMARK, FSSA (Food Safety & Standard Act).

Food Adulteration

Meaning, Types of Common Adulterants, Simple Detection Techniques.

FOOD MICROBIOLOGY AND QUALITY CONTROL

Time: 3 hrs

PRACTICAL

Marks : 50

- Use of microscope, its parts, accessories and their use.
- A visit to microbiological laboratory in the area and detect microorganism present in curd and milk.
- Method of preparing slides of harmful microorganism present in food.
- Practical observation and identification of common organisms causing food spoilage.
- Simple techniques of detecting food adulteration.
- Methods of detection of spoiled cans and care while consuming high pH foods.
- Fermentation techniques for juices and beverages (alcoholic beverages).
- Preparation of Brew Vinegar and Synthetic Vinegar.
- Determination of total soluble solids by refractometer - hygrometer salinometer and gel meter etc.
- Make a scrap file of labels of packed food showing measures of quality control.

PAPER-III

FOOD PRESERVATION TECHNIQUES

THEORY

Time : 2 hrs

Theory : 30Marks

CCE : 10Marks

Practical : 50 Marks

Total :90Marks

Food Preservation

Definition, Importance, Principles and Methods of Food Preservation.

Preservation by Salt

Principles and Process of Salting, Brining, Curing and Pickling, Limitations.

Preservation by Sugar

Principles involved in Jams, Jellies and Marmalades, Glazing, Crystallization, Limitations.

Preservation by Chemical

Introduction and Uses of Class I and Class II Preservatives, Limitations.

Food Preservation by Low Temperature

Refrigeration and Freezing, Storage and Spoilage, Advantages and Disadvantages.

Dehydration and Rehydration

Methods - Sun Drying and Mechanical, Principles, Factors affecting Drying, Types of Dehydrators, Dehydration & Rehydration Ratios.

Fermentation

Types - Alcoholic, Acetic and Lactic Acid Fermentation in Foods, Factors Controlling Fermentation & Importance of Fermentation in the Diet.

Advanced Methods of Preservation

Introduction, Application, Uses and Limitations of Irradiation, Antibiotics, Controlled Atmospheric Storage.

Pectin

Definition, Sources, Properties, Uses and Grades.

Junk Food

Meaning, Classification, Merits and Demerits.

FOOD PRESERVATION TECHNIQUES

Time: 3 hrs

PRACTICAL

Marks : 50

- Preparation, organoleptic evaluation and costing of –pickles.
- Preparation, organoleptic evaluation and costing of - jams &marmalade.
- Preparation, organoleptic evaluation and costing of - sauces, ketchup,chutneys.
- Preparation, organoleptic evaluation and costing of - fruit juices, squash, crush, cordial, sweetened juices, fruit & synthetic syrups, fruittoffees and fruit candies.
- Preparation, organoleptic evaluation and costing of – *pappad&varian*.
- Sun drying of seasonal vegetables and calculating their dehydration and rehydration ratio.
- Dehydration of available vegetables/ fruits usingmicrowave.
- Visit to cold store & food processing industry & report writing for thesame.
- Prepare a scrap file of packaging/ photos of food preserved by different techniques.

(ii)TRADE : GARMENT MAKING

PAPER-I

TEXTILE SCIENCE

THEORY

Time : 2 hrs

Theory : 30 Marks

CCE : 10 Marks

Practical : 50 Marks

Total : 90Marks

Fibers

Introduction, Classifications, Physical and Chemical Properties, Identifications, Uses, Care and Description of - Natural Fibers, Vegetable Fibers - Cotton and Linen, Animal Fibers - Silk and Wool, Manmade and Synthetic Fibers - Rayon and Nylon.

Yarns