

Semester II

Paper I Introduction to Textiles

M.M. 50

Unit I

Introduction to Textiles

- A) Classification of Textile fibers and their general properties.
- B) Importance of textiles in day to day life.
- C) Factors affecting selection of fabric for various end uses.

Unit II

History, composition, manufacturing process, properties and uses of common fibers

- A) Natural cellulosic fibers- Cotton, Flax and Jute.
- B) Natural Protein fibers- Silk and Wool.
- C) Synthetic fibers- Rayon, Acrylic, Nylon and Polyester

Unit III

Study of Yarns

A) Definition and types of Yarns

- i) Simple yarn: Single ply, cord, crepe, staple, filament, balanced, unbalanced, types of twist and effect of twist on fabric performance.
- ii) Complex yarns: Slub, flock/ flack, Bounce/ loop, ratine, loop, knot, grandelle chennille.
Methods of spinning.

Unit IV

Fabric Construction

- A) Study on Hand loom- parts and their uses
- B) Basic weaves used in fabric construction and classification of weaves
 - (i) Plain weaves and variations
 - (ii) Twill weaves and variations
 - (iii) Floating weaves
- C) Other Methods of fabric construction - netting, knotting, felting, braiding and bonding

Unit V

Fabric Finishes

A) Importance and classification

B) Methods and uses of-

- (i) Mechanical- tentering, calendaring, napping, sanforizing singeing.
- (ii) Chemical- Mercerizing, bleaching Additive- Sizing
- (iii) Special finishes- Water proof, moth proof, acid and basic finishes.

Practical

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- A) Identification of textile fabrics by- visual, burning, microscopic and chemical tests.
- B) Laboratory tests on fabrics- Fabric count and balance of cloth.
- C) Laboratory Identification of different types of weaves and collection of their sample.
- D) Color fastness to sunlight and washing of various fabrics.

Paper II Introduction to Resource Management

M.M. 50

Unit I

Home Management

- A) Definition, Philosophy and Concepts of Home Management.
- B) The Management process- planning, organizing, controlling and Evaluation.

Unit II

Family Life Cycle

- A) The Family life cycle and its stages.
- B) Qualities and responsibilities of a good home maker.
- C) Motivation in home management- values, goals and standard.

Unit III

Decision Making

- A) Importance and classification of decisions.
- B) Decision making process.
- C) Conflicts during decision-making.

Unit IV

Family Resources

- A) Classification and characteristics of resources.
- B) Time Management- Time demand in different stages of the family life cycle.
- C) Energy Management- Energy demands in different stages of family life cycle, Work curve and fatigue types.

Unit V

Work Simplification

- A) Definition of work simplification and its importance.
- B) Techniques of work simplification.
- C) Mundel's classes of change.

Practical

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- A) Time plans for different work situation.
- B) Making of waste material article.
- C) Making of a decorative article.

- D) Cards and book marks.

Paper III Applied Physics

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Unit I

Simple Machines

- A) Machines and their principles, efficiency, mechanical advantage, lever pulley and axel.

B) Working knowledge of household equipments like vacuum cleaner, hair dryer, food processor, washing machine, microwave oven and OTG's.

Unit II

Heating & Cooling Machines

- A) Functioning, utility and maintenance of- Heater, Iron, Water Geysers, OTG and Induction cook top.
- B) Functioning, utility and maintenance of cooler, refrigerator, air conditioner and deep freezer.

Unit III

Light & Electricity

A) Light-

- Properties and transmission of light.
- Laws of reflection and refraction, Normal vision, defects of vision.
- Working of camera, microscope and Binoculars.

B) Electricity-

- Transmission of electricity.
- Study of conductors, ammeter and voltmeter.
- Study of house wiring, earthing, transformer, adopter, plug, fuse, bulb, fluorescent tube.

Unit IV

Sound

- A) Production & Reflection of sound measurement of noise, echo and its uses.
- B) Elementary knowledge of radio, television, telephone, microphone and loudspeaker.

Unit V

Consumer Awareness

- A) Guarantee and warranty of all household equipments.
- B) Precautions while using equipments and servicing of equipment used.

Practical

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- A) Measurement of length and diameter with calipers.
- B) Determination of Refractive index of glass.
- C) Determination of Focal length of optical lenses.
- D) Verification of Ohm's law.
- F) Measurement of voltage of various household equipments used.

Paper IV Applied Chemistry

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Unit I

Introduction

- A) Branches of Chemistry, its terminology.
- B) Element, mixture, valency, compound, molar solution and equivalent weight.
- C) Atomic Structure of Electron, Proton and Neutron
- D) Atomic number, atomic weight and atomic structure of sodium, chlorine, copper.

Unit II

Acids, Base and Salts

- A) Alkaloids- Function and Properties of Alkali.
- B) Uses and effects of Nicotine and Quinine.
- C) Types of Dyeing agents and their uses.

Unit III

Study of Drugs

A) Definition and function of Antibodies, Antiseptics, Analgesics, Sulpha-drugs, Insecticides and disinfectants.

B) Fire extinguisher- use and maintenance.

Unit IV

Cosmetics

A) Composition, characteristics of cold and vanishing creams, lipsticks, nails paints, shampoo, suns creams and hair color, hair oil and dyes.

B) Precautions while purchasing cosmetics and while using them.

Unit V

Paints and Vanishes

A) Composition and Types.

B) Elementary knowledge of cement and glass.

Practical

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A) Maintenance and handling of physical and chemical balance.

B) Qualitative analysis of chloride, acetate, phosphate, sulphate, sulphide as acid radicals, basic radical as aluminum, chromium, zinc, copper, iron, nickel, lead.

C) Determination of pH

D) Qualitative analysis of preservative-nitrate, sulphites, salicylate, benzoate,

Paper V Sanitation and Hygiene

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Unit-I

Health

A) Concept of positive health, good health, mental health, school health.

B) Factors affecting health

Unit-II

Hygiene

- A) School hygiene and industrial hygiene.
- B) Health Hazards of industrial worker and safety measures.

Unit-III

Infection Diseases_ Symptoms, causes, care, and treatment

Unit IV

- A) Water, food borne diseases- cholera, dysentery, tuberculosis, hepatitis, diarrhea.
- B) Air borne and viral infection- influenza, cold, pneumonia, polio, measles, mumps.
- C) Insect and rodent agencies – Malaria, Plague, Dengue
- D) Direct contact through cuts and abrasions, skin disease, conjunctivitis, leprosy, tetanus.

Unit-IV

Food Sanitation

- A) Control and inspection
- B) Planning and implementation of training program for health personal.

Unit- V

Public health organization

- A) W.H.O., central and state health activities, immunization programmes (Triple vaccine – smallpox, polio, typhoid, cholera, tuberculosis, AIDS and hepatitis).
- B) Municipal and district health services.

Paper VI Meal Management

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Unit I-

- A) Relationship of nutrition to human health, growth and human welfare. Concept and definition of terms
- B) Recommended dietary allowances for Indians, Normal Nutrition, malnutrition, under nutrition, dietary fiber, water, acid- base balance, electrolyte balance.

Unit II-

A) Energy value of foods and energy requirement,

B) Basal metabolism, factors affecting basal metabolic rate, calorogenic effect of food, specific dynamic action of food.

Unit III-

A) Basic principles of meal planning and its importance.

B) Planning menu for individual and family

C) Factors affecting meal planning, food groups, their exchange and distribution

Unit IV-

A) Nutrition during infancy, preschool age, school age, Adolescence, Adults and the elderly (for both genders, various activity levels and all income groups).

Unit V-

A) Nutrition during pregnancy and lactation, nutritional requirements, effect of malnutrition on maternal health and pregnancy outcome.

Practical

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A) Categorization of food as rich, moderate and poor sources of energy, protein, fat carbohydrates, vitamins and minerals.

B) Demonstration, understanding of principle and working of a bomb calorimeter

C) Planning diets for different age groups, income groups and activity levels.

D) Planning diet for pregnancy and lactation period.