

## M.A./M.Sc. Home Science

### (Clothing and Textile)

#### SEMESTER I<sup>st</sup>

#### PAPER I<sup>st</sup>

### Textile Chemistry and Fibre Science

MM: 100

#### Unit-1

Introduction-

- Why study of textile chemistry is needed.
- Why this subject is related to textiles and clothing.

#### Unit-2

Polymer chemistry

- Polymers methods of polymerization, polymerization process
- Definition of Co-polymer, types of co-polymers
- Degree of polymerization, molecular structure of polymer and internal bond or force.
- Orientation and crystallinity of polymers, their influence on fibre properties.

#### Unit-3

Cellulosic Fibres i.e. Cotton, Jute, Flax, Hemp, Tencel.

- Introduction, Longitudinal and Cross Sectional view, properties
- Molecular Structure of cellulose, action of alkalis & acids.
- Mercerisation, bleaching, liquid ammonia treatment.
- Regenerated cellulosic fibres-viscose rayon, cuprammonium rayon, cellulose acetate, polyinosic-their manufacture, properties and uses.

#### Unit-4

Protein Fibres- Wool & Silk

- Chemical composition molecular structure, physical and chemical properties. Action of acids and alkalis on protein fibres.
- Brief description on felting of wool, degumming and weighting of silk shrink proofing of wool.

**M.A./M.Sc. Home Science**

**(Clothing and Textile)**

**SEMESTER I<sup>st</sup>**

**PAPER II<sup>nd</sup>**

**Apparel Design and Construction**

MM: 100

**Unit-1**

Detailed study of industrial machines and equipments uses for-

- Cutting
- Sewing
- Finishing
- Embellishment

**Unit-2**

Study of inter relationship of needles, thread, stitching, length and fabric-

**Unit-3**

Draft, Tucks, Pleats and gathers manipulation-

- Yoke, Facing, Fining and Pieces.

**Unit-4**

- Taking measurement
- Drafting
- Flat Pattern
- Pattern marking, pattern envelop, Guide Sheet.

**Unit-5**

Introduction of draping-

- Importance, Merit & Demerits.
- Tools & Equipment
- Method
- Comparison with pattern making.

**M.A./M.Sc. Home Science**

**(Clothing and Textile)**

**SEMESTER I<sup>st</sup>**

**PAPER III<sup>rd</sup>**

**Fashion Design**

MM: 100

**Unit-1**

Dynamics of Fashion

- Introduction
- Characteristics
- Principles
- Fashion Adoption theory
- Fashion Cycle
- Psychology of Fashion
- Fashion Terminology

**Unit-2**

(A) Elements used in creating a design

- Line
- Colour
- Form
- Shape
- Texture

(With one element with more than one element)

(B) Principles of Design

- Harmony and Unity
- Proportion
- Balance
- Rhythm
- Emphasis

**Unit-3**

Colour in Fashion Design

- Colour Wheel Theory
- Characteristics of Colour

- Colour Schemes
- Qualities of Colour

#### **Unit-4**

##### Components of Fashion: Introduction types & Importance

- Silhouette
- Fabric
- Texture
- Seams
- Trims
- Prints

**M.A./M.Sc. Home Science**

**(Child Development)**

**SEMESTER I<sup>st</sup>**

**PAPER IV<sup>th</sup>(Compulsory for all Branches)**

**Research Methods and Statistics**

**MM: 100**

**Unit-1**

Research: Meaning, Objectives and Significance of Research.

Types of Research: Historical descriptive, Experimental, Case study, Social Research, Observation research.

**Unit-2**

Variable: Meaning, nature and Types. Definition and identification of research problem: Selection, justification & Limitation of Research problems. Hypothesis: Meaning Nature, Characteristics, types and function of Hypothesis.

**Unit-3**

Sampling: Meaning, Objectives, Methods, Probable and Non-Probable Sampling, Two stages and Multi stages sampling, merit and demerits.

**Unit-4**

Data gathering instruments Observation, Questionnaire, Interview, Reliability and validity of – Socio-Metric Scale, Questionnaire, schedules, writing a research report.

## M.A./M.Sc. Home Science

### (Clothing and Textile)

#### SEMESTER II<sup>nd</sup>

#### PAPER I<sup>st</sup>

### Textile Chemistry

MM: 100

#### Unit-1

Synthetic Fibres: Their Chemical composition, Properties and uses.

- Polyester
- Polyamide
- Acrylonitrile

#### Unit-2

New Development fibres manufacture

- Metallic glass Fibre carbon
- Component and Bio constituent fibres

#### Unit-3

Principle of yarn manufacture

- Yarn processing for natural fibres cotton, wool, jute linen by conventional system and recent development like OE spinning rotor, vortex friction twistless, self twist yarns cover spum yarns, tape yarns.
- Yarn properties, yarn twist yarn number.
- Different classes of yarn and relationship to fabric properties.
- Textured yarn technology- process variables in texturing & their effect on properties of textured yarns.

#### Unit-4

- Classification of Finishes
- Chemical finishes Durable press wash 'n' wear, Wrinkle recovery
- Resins, their application and chemistry
- Flame retardant, Water repellent, antistatic, stain and soil releases, moth proofing

**M.A./M.Sc. Home Science**

**(Clothing and Textile)**

**SEMESTER II<sup>nd</sup>**

**PAPER II<sup>nd</sup>**

**Advance Apparel Construction**

MM: 100

**Unit-1**

Fitting Factors

- Affecting good fit.
- Common Problems encountered and remedies for fitting defect (Upper and lower garments).

**Unit-2**

Clothing for people with special needs

- Maternity and lactation period.
- Effect of clothes of the Childs growth and development.
- Old age.
- Physically challenged.

**Unit-3**

Evaluating the quality of apparel

- Fabric for the quality, defects, pricing and according to requirement.
- Apparel- Identification to the fibre content.
- Shaping devices pockets.
- Neckline treatments.
- Decorative details.

**Unit-4**

Buying Criteria for readymade garment

- According to individual requirement (age, occasion, season, occupation, Sex, Physical features etc.)
- Comparison with homemade garment.

**M.A./M.Sc. Home Science**

**(Clothing and Textile)**

**SEMESTER II<sup>nd</sup>**

**PAPER III<sup>rd</sup>**

**Fashion Retailing**

MM: 100

**Unit-1**

- The dynamic of fashion
- Fashion Illustration
- Classification of fashion
- Fashion Forecast.
- Designers International and domestic
- The role of designers in merchandising

**Unit-2**

The concept of Retailing

- Definition role of retailing in merchandise
- The retail mix, retail environment and types of retail stores.
- Functions of Retail Trade.

**Unit-3**

Planning and budgeting for a retail

- Store functions of distribution Channel
- Maintenance and ordering of stocks, preparation of sale reports
- Sale promotion, personal selling advertising & brands
- Consumer problems and protections.

**Unit-4**

- Plan and Schedule-Seasons, holidays promotion sales
- Themes & ideas
- Types of Display-Window display: interior display



**M.A./M.Sc. Home Science**

**(Clothing and Textile)**

**SEMESTER II<sup>nd</sup>**

**PAPER IV<sup>th</sup>**

**Statistics and Computer Application**

**MM: 100**

1. Conceptual understanding of statistical measures. Classification and Tabulation of data. Measurement of central tendency. Measures of narrations.
2. Frequency distribution, Histogram, frequency Polygons, ogive.
3. Correlation, Coefficient of correlation, rank correlation.
4. Regression
5. Chi-Square Test, Goodness of fit, Independence of attributes and confegency tables.

**M.A./M.Sc. Home Science**

**(Clothing and Textile)**

**SEMESTER III<sup>rd</sup>**

**PAPER I<sup>st</sup>**

**History Costume and History of Fashion**

**MM: 100**

**1.**

- Clothing –origin and reasons.
- Why costume differ all over the world, material aspects and climate.

**2.**

- Costume in ancient India civilization Gupta, Rajput.
- Costume in either ancient civilization i.e. Egypt Rome.

**3.**

- Study of Traditional textile of India Patola Brocade Chanderi Ikat Lissan Kota. Sanganeri Prints, Kalambari and Madhubari.

**4.**

- Study of Traditional Embroidery Punjabi Ki Phulkari, Chikankari of U.P., Kashida of Kashmir, kantha, Chamba of Himachal, Kastuti of Karnataka, Embroidery of Manipur, Rajasthan and Gujarat etc.

**M.A./M.Sc. Home Science**

**(Clothing and Textile)**

**SEMESTER III<sup>rd</sup>**

**PAPER II<sup>nd</sup>**

**Dyeing and Printing**

MM: 100

**1. Preparation of fabric for dyeing and printing.**

- Scouring
- Bleaching
- Reagents used and their applications.
- Specific preparatory steps for cotton, wool, silk and manmade fibers.

**2. Unit dye**

- Dyeing with natural dyes.
- Harya Mechandi, Harsingar
- Dyeing with chemical dyes.
- Direct reactive, sulphur, azo(for cellulose)
- Acid, metal complex, chromemordant (for protein)

**3. Dyeing**

- Use of pigments
- Dyeing process

**4. Textile design through dyeing**

- Tie and dye
- Batic
- Union & cross dyeing

**5. Introduction to printing**

**6. Historical development of printing methods.**

- Blocks
- Stencil
- Screen Roller
- Rotary Screen

## **7. Special Printing procedure**

- Polychromatic dyeing
- Transfer printing
- Carpet Printing
- Flock Printing

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#### PAPER III<sup>rd</sup>

### Fabric Construction

MM: 100

#### Unit-1

- Principles of Fabric manufacture- Basic Principles, Characteristics and Significance of Different Process- Woven, Knitted, Non-Woven, Laces, Braids.

#### Unit-2

- Weaving- Definition, terminology, Characteristics of Woven Fabrics.
- Loom –Development Parts & Functions, Various Types of Loom.
- Basic Weaves –Plain, Basket, Twill, Satin, Dobby, jacquard, Pile, Leno.
- Recent developments in Loom- Triaxial Loom.

#### Unit-3

- Knitting –Definition, Principles, basic Structural Terms.
- Four Primary base Structures: Plain, Purl, Rib Interlock
- Warp Knitting –Weft knitting –terms definition, terminology,
- Basic structures, Stitches-jersey, Rib, Purl, Interlock, Tricot Rashel Simplex Milanese.
- Jacquard Knitting Needles yarns.
- Knitting machine –Flat & Circular
  - Needle Bed Assembly
  - The Carriage
  - Yarn Feeding
  - Needle Table-Down
  - Manual Operation
- Comparison of Warp Knitting and Weft Knitting
- Comparison of Weaving and Knitting.

#### Unit-4

- Felt
- Foam
- Film
- Fur

**M.A./M.Sc. Home Science**

**(Clothing and Textile)**

**SEMESTER III<sup>rd</sup>**

**PAPER IV<sup>rd</sup>**

**Fashion Illustration**

MM: 100

**Unit-1 Garments and Garment Details**

- Necklines
- Sleeve details
- Skirts and trousers
- Types of Yokes

**Unit-2 Garment Trims and Decorative Details**

- Drawstring and fastening
- Tassels and Tucks
- Different Type of Pleats
- Shirring and Fringes and gathers
- Hemlines and Insertions

**Unit-3 Sketing of Accessories**

- Hats and head gears
- Footwear
- Bags and Purses
- Jewellery

**Unit-4 fashion and Communication Prices**

- Communication through different media
- Visual communication
- Visual merchandising & display
- Fashion Photographs, Fashion Shows and Multimedia

**M.A./M.Sc. Home Science**

**(Clothing and Textile)**

**SEMESTER IV<sup>th</sup>**

**PAPER II<sup>nd</sup>**

**Textile Design (Structures)**

**MM: 100**

1. Design analysis
  - Structural and applied variation in fibre, yarn and fabric construction embroidery, dyeing printing and finishes.
  - Principles of design- harmony, balance, proportion, rhythm and emphasis.
  - Elements of design –line and form, colour and texture.
2. Sources of inspiration for basis sketching and painting nature, religion and mythology, arts and crafts architecture.
3. Understanding the tools and equipment and their appropriate use for sketching painting and achieving textural effects.
4. Process of designing
  - Motif development – geometrical, simplified, naturalized, stylized, abstract and ornamental.
  - Big and small motifs- enlargement and reduction, growth of a motif
  - Placement and repeats for all over patterns.

Study of traditional Indian Textile Design.

- Jamdani
- Paithani
- Baluchari

**M.A./M.Sc. Home Science**

**(Clothing and Textile)**

**SEMESTER IV<sup>th</sup>**

**PAPER III<sup>rd</sup>**

**Entrepreneurship Management**

**MM: 100**

**Unit-1**

- Entrepreneurship – definition characteristics, types of entrepreneur, features of entrepreneurship, theories of entrepreneurship, Entrepreneurship.

**Unit-2**

- Agencies for development of entrepreneurship – Role of SSI procedures and formalities for setting up SSI role of NSIC – supply of machinery and equipment on the purchase.

**Unit-3**

- Personal effectiveness –factors affecting entrepreneur’s role, effective communication skill, achievement motivation, goal orientation; psychological barriers to self employment creativity assertiveness, quick response.

**Unit-4**

- Management Techniques- Planning organizing, appointing, Staff and Executing controlling.