

According to Ordinance
Syllabus of
Bachelor of Science (Textile & Handloom)

(1ST SEMESTER)

WEAVING THEORY - I (FIRST PAPER)

Unit—I

Evolution of parts of Loom, heald, Reed, beam, warp, weft, lease rod, shuttle, types of shuttle, sley, treadle, Knife, slay race, weavers beam, cloth beam, lease reed, What is fabric, warp, weft, Interlacement technique of warp and weft, different arrangement of loom parts, passage of warp on the loom.

Unit—II

Development of Handloom and traditional handloom (Pit loom, Frame loom, Varanasi loom, Salem loom, Manipur loom) discuss with neat sketch, Type of motion on loom. common method for draw-in-indenting, dressing and gaiting operation.

Unit—III

Loom motion - Primary, Secondary and Auxilliary motion, Shedding mechanism of loom (Close Shedding, Bottom Centre Closed Shedding, Open Shedding, Fully open & Semi Open Shedding) and their working and formation.

Unit—IV

Discuss the picking motion (under pick motion, over pick motion) working mechanism with diagram. Discuss the beating up motion working and their mechanism.

GENERAL TEXTILE MANUFACTURING - I (SECOND PAPER)

Unit—I

Classification and Properties of Textile fibres, The study of fibre, Natural fibres, Geographical Distribution. Method of Production. Properties of Cotton, Wool, Silk, Jute. Man-made fibre, Regenerated & Synthetic fibres.

Unit—II

Brief study about cotton spinning operations viz. blow room, carding-drawing-combing-speed frame- ring frame - reeling - bundling - bailing, Brief study of mechanical processing of silk (filament silk and spun silk) - Wool (woollen and worsted) - Jute, Advanced spinning techniques such as open end spinning & Friction spinning.

Unit—III

Preparatory process of weaving - different forms of package of yarns, study of slow speed, high speed winding machine, study of slow speed. Modern high speed beam and sectional warping machine.

Unit—IV

Study of sizing, sizing ingredient, varieties of adhesive, lubricants, antiseptic and Tinting agents, study of mill sizing machine with diagram, brief study of pirn winding machines.

PHYSICS (THIRD PAPER)

Unit—I Mechanics

Units and dimension — M.K.S. system— C.G.S. system; Fundamental quantities and units (S.I. System), derived quantities and units (S.I. System), Supplementary S.I. Units- Dimensions and Dimensional formulae, application of Dimensional equations with examples, Limitations.

Unit—II Heat

Expansion of solids — Definitions of coefficient of linear... cubical expansions and derivation of their inter relationship. Determination of coefficient of linear expansion. Expansion of liquids - The coefficient of real and apparent expansion and the relation between them. Experimental determination of coefficient of apparent expansion by specific gravity bottle. Expansion of gases- Volume and pressure coefficients of expansion of gases. Derivation of their relationship. Boyle's law and Charles's law derivation of ideal gas equation.

Unit—III Light

Optical instruments — Simple microscope, derivation of expressions for magnification of image at near point and at far point. compound microscope and its magnification, Ramsden and Huygen's eye pieces. Pure spectra and condition for forming pure spectra, Derivation for the refractive index of a prism. Fraunhofer's lines and their significance. Ultraviolet and infrared rays (properties and uses)

Unit—IV Electricity

Ohm's law — Resistance - conductance - inductance (Definitions) Resistance in series and parallel — E.M.F.- Potential difference - Coulomb's law for electric charges, Electric potential capacity, capacitors in series and parallel, Kirchhoff's laws, Explanation and application of Kirchhoff's laws to Wheatstone's Bridge.

ENGLISH (FOURTH PAPER)

Unit—I

Sentence : Types, kinds, parts, uses, Tenses and their types, structures, usages, Passive/Active voice and structure, Direct and Indirect speech, formula.

Unit—II

Common Sources in — Noun, Pronoun, Adjective, Adverb, Discuss - G.D. Seminar, Interview, Meeting, Presentation.

Unit—III

Letters - Good News letters, Bad news letters, E-mail, etiquette, Making Resume, Writing Composition/summary writing.

Unit—IV

Formation of words - Parts of speech, Verb - definition, kinds, finite & non-finite verbs, Model Auxiliaries - use.

TEXTILE CHEMISTRY THEORY - I (FIFTH PAPER)

Unit—I

Definition, determination of equivalent weight, numerical, problems based on equivalent weight. Definition determination of molecular weight by various methods, Definition of pH, Use of pH paper, Dutoomatic weight & Automatic weight

Unit—II

Sources of Water, definition of hard water and expression of hardness of water, Disadvantage of hard water, Softening of hard water by various methods.

Unit—III

Lab preparation, Properties and uses of Sodium Hydroxide, Sodium Carbonate, Nitric Acid, Hydrogen Peroxide, Bleaching power, Sulphuric Acid, Properties and uses of Thiosulphate, Rongalite-C (Sodium Sulphoxylate for Maldehyde), Glaber's salt

Unit—IV

Classification of organic compounds - open chain, closed chain, Saturated/Unsaturated hydrocarbr Series. Carbohydrates - Definition, Definitions of oils and soaps- Manufacture of soap and its uses in textile preparation. Properties and uses of Alconals (Methyl and Ethyl) Ehtylene Glycal, Acids (Acetic & Formic), Esters, Ketones.

WEAVING PRACTICE (SIXTH PAPER)

Drawing and Measurement of various loom parts. Practice in piecing, knotting-winding on bobbins and pirns-Warp preparation using peg warping board, Sectional Warping Machine, Vertical warping machine and Horizontal warping Mill. Practice in Piecing or drawing as per draft-denting and gaiting-up. Tie-up practice on Multi treadle looms. Dismantling, erection and setting of Frame Looms-Weaving practice on pit loom and Fram loom with throw and fly shuttles.

(IIND SEMESTER)

FABRIC STRUCTURE & CLOTH ANALYSIS - I (FIRST PAPER)

Unit—I

Fabric-its design and planning-use of graph paper in fabric designing use of different counts of graph paper-creation of draft and peg plan from design and vice-versa-creation of tie-up plan.

Unit—II

Basic standard weaves i.e., plain weave and its derivatives, ornamentation of plain cloth.

Unit—III

Simple twill (warp faced and weft faced), pointed/waved twill, Herring Bone, broken twill figured twill, twill-dice checks.

Unit—IV

Diamond, satin (regular and irregular), sateen weave and its design on graph paper and peg plan.

GENERAL TEXTILE MANUFACTURING-II (SECOND PAPER)

Unit—I

Study of chemical structure and properties of man-made fibers. Technique of wet spinning, Dry spinning and melt spinning principles of production and sequence of operations in the manufacture of man-made fibres like nylon 6, nylon 66, polyester, viscose rayon acrylic, mode acrylic, poly olefins.

Unit—II

Method of conversion of various types of fabrics into ready made garments, pattern making, cutting, stitching and finishing, study of satin removing techniques and laundering of different textile material.

Unit—III

Introduction to various techniques of fabric production namely knitting - brief description about the processes and study of warp knit and weft knit structures - production of non-woven fabrics in brief by various method viz. dry laid, wet laid and needly punched, carpet production technology, warp & weft yarns of different material.

Unit—IV

Basic principles and uses of texturised yarn, preparation, production and end uses of the following yarns, viz- crepe yarn, fancy yarn such as spot yarns - crimp yarn - snarl yarn - flake yarn - loop yarn - chenille blended yarns (Polyester - cotton, polyester, viscose and polyester - wool), metallic yarns, industrial yarns.

TEXTILE DESIGN AND COLOUR - I (THIRD PAPER)

Unit—I

Light and colour phenomena, basis of colour. Primary, secondary and complementary colours in light theory, pigment theory-colour mixture of pigment theory-Attributes of the primary and secondary colours, Preparation of colour circle for light and pigment theory showing primary, secondary and complementary colour.

Unit—II

Tertiary colours, Triadic colours, Modification of colours to get shades, tint and tone by mixing with another colour/black/white. Monochromatic/polychromatic contrast, successive contrast and simultaneous contrast hue, contrast tone.

Unit—III

Harmony of analogy of tone, Harmony of analogy of hue, Harmony of contrast of tone, Harmony of contrast of hue. Ornamentation of fabric by using colour stripes and checks, spotted patterns, simple regular pattern, simple irregular patterns, compound order.

Unit—IV

Making a design of stripe and check with primary and secondary colours.

MACHINE DRAWING (FOURTH PAPER)

Unit—I

Drawing instruments and their uses, lines, lettering and dimensioning, reducing and increasing scales.

Unit—II

Representative fraction, sheet layout, orthographic projection, planes of projection, first angle projections, projection of simple solids such as prism and pyramids, isometric projection.

Unit—III

Conversion of pictorial views of various machine parts into Brief study of orthographic views in first angle projection, V-threads, square threads, hexagonal and square nuts.

Unit—IV

Hexagonal and square headed bolts, rivets and riveted joints, pins, keys and cotters, flanged coupling, solid bearing.

TEXTILE CHEMISTRY THEORY -II (FIFTH PAPER)

Unit—I

Classification of textile fibres, properties, uses and entire natural fibres, Man-made fibres, Metallic fibres, Glas fibers, Rock Fibres.

Unit—II

Singing, Scouring, Bleaching, Designing, Process sites necessity chemicals used prints processing.

Unit—III

Different types of dyes, its application on natural fibre yarn, silk, cotton; synthetic fibres, direct dyes, basic dyes, reactive dyes, acid dyes & synthetic dyes.

Unit—IV

Natural dyes, Vat dyes, its application per different colours like red, black, natural, Khaki.

TEXTILE CHEMISTRY PRACTICE (SIXTH PAPER)

Study of Acid and Basic compound by the Titration method, Test of acid and basic by pH paper, Preparation of bleaching power, sulphuric acid, sodium hydroxide, nitric acid, sodium carbonate, Test of different soap and detergents, water hardening test.

(IIIRD SEMESTER)

WEAVING THEORY-II (FIRST PAPER)

Unit—I

Mechanism of picking (under pick motion over pick motion) discuss with diagram, Take up motion, Positive Take up motion, Five Wheel, Seven Wheel, Negative Take up motion, Let off motion, Positive Let off motion & negative let off motion, Dead weight motion, Brake Let off Motion.

Unit—II

Introduction about Auxillaries motion, Loose reed motion, fast reed motion, weft fork motion, warp stop motion, weft stop motion, Multi shuttle box motion, discuss with diagram. Problems associated with cloth faults (warp defects and weft defects)

Unit—III

Introduction of semi-automatic loom and their types, Arrangement of different motions in semi automatic looms, comparison of handloom & semi automatic loom, Timing and setting loom. Types of tappet shedding mechanism with diagram, Different design of cam in the respect of different tappet shedding mechanism.

Unit—IV

Limitation of different shedding mechanism and their advantage and dis-advantage, Introduction of dobby shedding mechanism discuss with diagram. Type of Dobby (single lift, double lift), Discuss (Kieghley Dobby, Hattersley Dobby. Discuss with diagram and mechanism. Method of Picking for handloom Dobbies.

COMPUTER APPLICATIONS (SECOND PAPER)

Unit—I

Generation of Computer Systems and Growth of Personal Computers, Computer Organization : Central Processing Unit; Storage Devices : Primary and Secondary Storage Devices; Input-Output, Language and Communication.

Unit—II

Use of MS-Office : Basic of MS-Word, MS-Excel and MS-Powerpoint; Application of these Software's for documentation and making reports; Preparation of Questionnaires, Presentations, Presentations, Tables and Reports.

Unit—III

Concept of an Operating System Functions and Scope of LAN, WAN Network; Internet; Email.

Unit—IV

Introduction of MIS and Information Systems, Role of MIS Information Technology (IT) Applied to various Functional Areas.

TEXTILE CALCULATION-I (THIRD PAPER)

Unit—I

Introduction about the need for Yarn numbering system - Different system of numbering yarn - Direct system, Indirect system, Universal system, Conventions from one numbering system into another and within system.

Unit—II

Different conversion and their units of direct and indirect system, calculation related to count, weight and length in all system.

Unit—III

Average Count, Method of Arriving of average count, wage of different count and Quantum of different counts, Reed calculation, Heald Calculation, Heald Count and Reed Count. Calculation of a certaining counts of healds for various drafting system (space draft casting out of the heald)

Unit—IV

Calculation related to speed (Pulley, Gear, Belt, Chain & Chain Wheels) Production & Efficiency of warp winding, weft winding, doubling warping.

TEXTILE DESIGN AND COLOUR - II (FOURTH PAPER)

Unit - I

Drawing of traditional designs used in Kancheepuram saree, Balaramapuram-Setmundu, Dharmavaram sarees, Pochampalli tie and "dye, Mysore silk saree, Paithani, Ikat, Jamdhani, Balucharr; Himroo shawls.

Unit - II

Design development according to its method of production and end-use -Designs for weaving, Designs for printing, Designs for dress materials, Designs for furnishing, and Designs for upholstery; Design selection based on different forms of layout -Design selection and setting for saree and traditional silk sarees (border, pallav and butta) and for Real Madras Handkerchiefs.

Unit - III

Planning the design, placement, repeats Construction of sketch design- Design unit & repeats - Importance of unit creation and setting of unit in repeat in multi unit repeats - Symmetrical figures- Drop device -Half drop & Drop reverse

Unit - IV

Design, Drawing & Painting of Banarsi Sarees, Booti, Pallav.

FUNDAMENTALS OF MANAGEMENT (FIFTH PAPER)

Unit—I

Management - Concept, Nature & Scope. Process & Function of Management and Managers. Management as a Science or Art.

Unit—II

Functions of Management - Planning, Organization, Staffing & Controlling, Leadership and its function, Communication Fundamentals. Concept of Perception, Attitude, Personality, Learning and Motivation.

Unit—III

Nature and Types of Business. Forms of Organizations - Sole Trade, Partnership and Joint Stock Company. Different Areas of Management (Functional aspects of Management : Marketing, Finance Human Resource Production & Information Technology).

Unit—IV

Industrial Labour, Labour Laws in India, Industrial Disputes and Settlement, Collective Bargaining.

WEAVING PRACTICE (SIXTH PAPER)

Study of different picking motion, Draw the line diagram of seven wheel take-up motion and five wheel take-up motion with calculation of change wheel according to the change of fabric structure, study of different let off motion, study of different auxiliary motion. Designing of cam for tappet shedding for specific plain weave.

(IVTH SEMESTER)

TEXTILE CALCULATION-II (FIRST PAPER)

Unit—I

Calculation related to speed of different parts of looms production & efficiency of loom 5 wheels take up motion and 7 wheel take up motion calculation of change wheel.

Unit—II

Calculation of sizing machine (slasher sizing machine and multicylinder), Production & efficiency, time required to size, a set of back beams, calculation of size percentage, count of size warp etc.

Unit—III

Calculation of Diameter of yarn, Determination of yarn diameter by ASHENHURST, LOW and PIERCE'S method, Determination of yarn count from diameter cloth cover crimp percentage, change of pattern of a fabric keeping the same denseness.

Unit—IV

Factors involve in cloth calculation, Contraction of warp & weft, cut length, Tape length, Regain, Allowances of selvedge weight of warp & weft involved in fabric, calculation of weight of fabric (warp & weft both)

FABRIC STRUCTURE AND CLOTH ANALYSIS - II (SECOND PAPER)

Unit - I

Distorted thread effect, Spider weave, Bed-ford cord, Welt, Piques, quilt, Extra warp and Extra weft designs, Alhambra. Double cloth and its derivatives like tubular cloth, piled cloth, etc., incorporating weaves like plain, twill and satin.

Unit - II

Treble cloth and its use. Classification of pile fabrics. Weaving of the warp pile and weft pile fabrics. Chennile and hand knotted pile. Terry weave and its ornamentation to form stripe, check and dobby figure effect. Draft and peg plan for the weaves of the course.

Unit - III

Constructional details of the typical fabrics made using above weave of the course, especially for handloom fabrics. Techniques used in production of hand loom samples.

Unit - IV

Collection of different state wise samples including fabrics produced on loom. Analysis of simple fabrics covered in First and Second Year Courses.

TEXTILE CHEMISTRY THEORY-III (THIRD PAPER)

Unit—I

Wool - Method of scouring of wool (Suint, Emulsion, Solvent, Freezing), Bleaching with Hydrogen peroxide sulphur dioxide (Stoving), Felting & Milling - Stabilizing, processing for woollen materials (Potting, Crabbing Decatising), Structure aspects e.g. amphoteric character and ISO - electric, dyeing of wool with acid dyes and reactive dyes.

Unit—II

Silk - Degumming process, causing soap, mild alkali & enzyme, bleaching with hydrogen peroxide and sulphur dioxide. Acrylic - Manufacturing of acrylic, its types e.g. (mod. acrylic), Tetardevs used in dyeing of acrylic, Role of Retarders, dyeing of Acrylic with basic and Cationic dyes.

Unit—III

Polyster & Nylon - Manufacturing of PET & Nylon, Heat setting, brief introduction of dyeing mechanism of PET(carrier dyeing thermosol; HTHP been dyeing and jet dyeing with required m/c, dyeing of nylon with disperse and acid dyes, Reduction clearing.

Unit—IV

Definition of Textile chemistry auxiliaries - oils, soaps, detergents, water repelling agents, anticrease agents, softeners, leveling agents, tickners, antipilling agents, wetting agents with their chemistry of working.

POLLUTION CONTROL IN TEXTILE INDUSTRY (FOURTH PAPER)

Unit - I

Environmental pollution : meaning and factors, types of environment pollution : air pollution, water pollution, noise pollution, industrial pollution.

Unit - II

Air pollution - Environmental pollutants, pollution, source of pollutants, air pollution in textile industry, air pollution control devices, sampling method of effluent gases from boilers and such stack emission. Evaluation of parameters like CO₂, CO, NO₂, SO₂, SO₃ and Hydrocarbon.

Unit - III

Water pollution- classification of water pollutants, characteristic of waste water, Evaluation of parameter (TDS, BOD & COD), water conservation in textile industry, method of effluent treatment.

Unit - IV

Method of treatment of water, Industrial water treatment with special reference of softening by lime soda, iron exchange, technique. Treatment of waste water. Design of suitable water treatment scheme for a textile mill.

MATERIAL SCIENCE & ENGINEERING MECHANICS (FIFTH PAPER)

Unit—I

Introduction to engineering materials, its properties e.g. physical, chemical & acquired, Metals and non metals, organic, inorganic and bio-logical materials, uses and scope of these engineering materials, fracture in metals, brittle fracture and ductile fracture.

Unit—II

Introduction to stress and strain, stress-strain curves, hooks law & its effect on materials property, Types of metal joinings, welding, types of welding, electric welding, gas welding soldering, process sequence, uses and limitation of different types of welding & soldering.

Unit—III

Transmission of motion i.e. Belt drive, Gear drive, Chain drive, Gear ratio, calculation of compound wheel motion and calculation of belt drive with slitage.

Unit—IV

Steel generator, types of steel, Horizontal boilers and their type, vertical boilers and their type, mounting and accessories of boilers.

TEXTILE CHEMISTRY PRACTICE (SIXTH PAPER)

Test of acid and basic by pH paper, Preparation of bleaching power, sulphuric acid, sodium hydroxide, nitric acid, sodium carbonate, Test of different soap and detergents, water hardening test. Study of desizing, chemical required and process sequence, To desize the given cotton sample with oxidative and reductive method. Scouring, its uses, chemical required & process sequence, To scour the given cotton yarn sample with soap and soda ash, bleaching, method, object and process sequence to bleach the given cotton yarn with hypochlorite method using bleaching powder, bleaching with hydrogen peroxide & process sequence. Dyeing of cotton sample with direct dyes and reactive dyes process sequence and after treatment required. Basic concept and process sequence.

(VTH SEMESTER)

WEAVING THEORY-III (FIRST PAPER)

Unit—I

Introduction of Jacquard, Different parts of Jacquards and their functions with diagram, card cutting mechanism (Piano card cutting, electronic card cutting mechanism), Jacquard Harnessing mechanism (Straight harnessing and Angle harnessing)

Unit—II

Different types of Jacquard (Single lift single cylinder, Single lift double cylinder, Double lift double cylinder), Special Jacquard (Cross border Jacquard, Gauze and Leno Jacquard), Advantage and Dis-advantage of different types of Jacquard over handloom.

Unit—III

High speed looms, Modern techniques of picking mechanism i.e. Water jet, Air jet and Projectile mechanism discuss with diagram. Comparison of modern looms over handloom and powerloom.

Unit—IV

Timing of loom motion for different shedding mechanism. Control of cloth defects (stain, patchiness, yarns slip, irregular rappiness, snarls, temple marks and etc.)

FABRICS STRUCTURE & CLOTH ANALYSIS-III (SECOND PAPER)

Unit—I

Study of weave backed cloth, warp back and weft back cloth, wadded backed cloth, imitation of back cloth, warp imitation, weft imitation, Gauze and Leno, Strip and Check, Net Leno, combined leno, point paper, its count, used in designing.

Unit—II

Preparation of graph and different jacquard, weaving technique for single cloth, double cloth double cloth, Demask painting technique, Patent Satin, Pique, Tapestry, Weft tapestry, coloured tappestry and Terry.

Unit—III

Brocades, Pile fabrics, warp and weft pile fabrics, Velvet-velveteen and curduroy, Study of weaving technique for different types of saree, jamdani, Baluchari, Tie-dye varieties, Kancheepuram.

Unit—IV

Detailed Study of different weaves and patterns used for masru fabrics, Kancheepuram silk sarees, Banarsi Sarees, Analysis of different woven sample.

COMPUTER AIDED TEXTILE DESIGN & INFORMATION TECHNOLOGY THEORY (THIRD PAPER)

Unit—I

Design calculation as per given Jacquard and harness set - its importance in CATD. Introduction of computer application in textile designing - fundamentals - different methods and advantages of CATD - basics of computer designing.

Unit—II

Computer aided graph making, computer aided card punching, printing designs - usages of CATD in textile printing. colour forecasting and fashion designing. colour selection as per the global designing in handloom sector.

Unit—III

Introduction of I.T., application of I.T. in various fields, Accounting (financial accounting), Introduction to tally and use of it in inventory management.

Web technology— Basics of the Internet, components of website, Planning and organizing a website, types of content for a website, creating an outline for a website, hosting a website.

Unit—IV

Programming fundamentals with C++ : Introduction to C++, understanding fundamental data types, understand structure of C++ program, Programming constructs like 'If', 'Else'..., conditional constructs, Unary operators, looping constructs.

COMPUTER AIDED TEXTILE DESIGN & INFORMATION TECHNOLOGY PRACTICE (FOURTH PAPER)

Unit—I

Transfer of design to point paper - various steps in transferring designs from sketch to point paper.

Unit—II

Dobby designing - creation - design, draft, peg plan, creation and its manipulation - colour patterns - simulation- print out in real scale. Jacquard designing — principle of creating motifs in computer, drawing tools- motifs scanning, scanning parameters- colours and attributes, editing the image for graph making- scaling, rotating, reversing, dropping etc.

Unit—III

Web technology— Creating an outline for a website, hosting a website, the origin and background of HTML, the need for URLs, Enhancing and HTML page, using images, colour and background in an HTML page, creating tables and frames in a web page, designing forms, creating a website using front page.

Unit—IV

Understanding structure of C++ programming constructs like 'If', 'Else'..., Unary operators and looping constructs.

WEAVING PRACTICE (FIFTH PAPER)

Unit—I

Study of different mechanism of dobby, Single lift, double lift with line diagram of different parts and their practice. Design of peg of dobby.

Unit—II

Single lift single cylinder jacquard, dismantling and erection, harness building, Straight tie, point tie and sectional tie.

Unit—III

Preparation of paper painted motifs for various capacity jacquard, enlargement of design on graph paper for double cloth patient satin, pigue, backed cloth and tapestry.

Unit—IV

Card punching on piano card cutting machine lacking and mounting of cards on jacquard, Weaving of above varieties on jacquard looms

MARKETING MANAGEMENT AND ADVERTISING (SIXTH PAPER)

Unit—I

Nature, Scope & Concept of Marketing; Marketing Management, Defining Consumer behaviour, Reasons for studying consumer behaviour, Applying consumer behaviour knowledge, Understanding consumer and market segments, Market forecasting. Difference between Marketing and Selling.

Unit—II

Market Segmentation and Product Differentiation, Target Market Selection, Positioning - Nature, Importance and Process of Marketing Research.

Unit—III

Marketing Mix, New Product Development, Product Mix, Branding and Packaging decisions, Product Life Cycle, Pricing Decisions. promotion Mix-Concept of Advertising, Sales promotion, Personal Selling; and Concept of Public Relations; Direct Marketing & Relationship Marketing.

Unit—IV

Channels of Distribution; Levels and Types of Channels, Management of Physical Distribution; Current Trends in Wholesaling and Retailing; Emerging Trends & Issues in Marketing; Rural Marketing. CRM, Service Marketing, Marketing, Internet marketing.

TEXTILE CHEMISTRY PRACTICE (SIXTH PAPER)

Unit—I

Study of bleaching of wool by H_2O_2 , Sulphur-di-oxide (stoving method)

Unit—II

Study of degumming process of silk and bleaching of silk by H_2O_2 & sulphur-di-oxide.

Unit—III

Study of dyeing of polyester and nylon fibres, study of closed kier & open kier dyeing process.

Unit—IV

Study of dyeing of nylon with disperse and acid dyes. Study of dyeing of a acrylic fibre by basic and cationic dyes. Study of different type of HTHP Beam dyeing machine and jet dyeing machine with line diagram with their working.

(VITH SEMESTER)

TEXTILE CHEMISTRY THEORY-IV (FIRST PAPER)

Unit—I

Printing — Preparation of printing paste, essential ingredients of printing paste with function & example, methods of printing outline of mechanised & non-mechanised methods, block printing & procedure, screen printing, screen making, accessories used and working procedure.

Unit—II

Roller printing, defects & remedies, Rotary screen printing, flat bed screen printing, Transfer printing, principle and method of transfer printing, defects and remedies, Styles of printing, definition of various styles, discharge printing, resist style, traditional styles like Tie & die, Kalamkari, Batik, Foam, folk & domask printing.

Unit—III

Printing with direct dyes, printing with reactive dyes, recipes, chemical used & procedure, printing with pigments, principles, recipes, function of various chemicals, After treatment of printed cloth, short notes on steaming Ageing & Curing.

Unit—IV

Finishing — Objective of textile finishing, factors affecting selection offinishes, mechanical & chemical finishes, finishing of cotton, drying, calendaring, embossing, Anti-shrink finishes in cotton, sanforising process to improve servicability e.g. fire proofing, moth poffing, water repelency, soil release and perchementing.

TEXTILE CHEMISTRY PRACTICE (SECOND PAPER)

Unit—I

Dyeing — Dyeing of polyester/cotton blends, with appropriate dyes, producing solid shads and resene shade on different blends with appropriate dyes.

Unit—II

Printing — Printing of cotton fabric with direct, reactive, vat and azic dyes in direct style, printing of silk with acid & pigment colours. Discharge style of printing in silk, cotton with reactive colours.

Unit—III

Finishing — Application of anti-crease finish, silicon finishes on cotton fabrics common finishes on silk.

Unit—IV

Evaluation — Evaluation of light fastness wash fastness, rubbing fastness of dyed or printed textile materials.

TEXTILE TESTING & QUALITY CONTROL (THIRD PAPER)

Unit—I

Importance of textile testing, objectives & role, sampling, methods & purpose, moisture in textiles, humidity & its role standard testing atmosphere, fibre testing, fibre length, evenness, air permeability, count testing, estimation of yarn count by wrap reel, Knowles balance, Beesley balance & quadrant balance.

Unit—II

Study of yarn evenness, its importance, estimation of evenness by cut & weight method, capacitance method, Uster evenness tester, Uster classmate, fielden walker evenness leas, CRL, CRT & CRE principles, strain gauge principles, Ballistic principles, study & estimation of..... .

Unit—III

Fabric test, estimation length & breadth, fabric tensile strength testing, Tearing strength testing, Ballistic tear tests, elementary tear test, Bursting strength testing, abrasion resistance & testing, Martindale abrasion tester, ICI pilling tester, crease resistance & testing, water & air permeability testing of fabrics.

Unit—IV

Standard quantity related terminology, quality management, quality system, quality plan, quality policy, quality assurance, quality control, ISO 9000, ISO 9001, ISO 9002, ISO 9003, ISO 9004, Elements in ISO 9000 standards, management & design control, process control, inspection & corrective measures.

TEXTILE TESTING PRACTICE (FOURTH PAPER)

Unit—I

Estimation of moisture content & regain using oven dry method, visual method of assessment of yarn evenness using ASTM standards.

Unit—II

Estimation of yarn count using Knowles' balance, Beesley balance quadrant balance & stubb balance, Estimation of twist in single & double yarn using twist testers.

Unit—III

Estimation of yarn strength, single yarn tester, lea strength tester, estimation of fabric strength - tensile, tear, ballistic & bursting strength

Unit—IV

Testing of abrasion resistance, cloth crease recovery, pilling test for cloth, crimp testing, estimation of weight of woven fabrics.

ENTREPRENEURSHIP DEVELOPMENT AND BUSINESS ENVIRONMENT (FIFTH PAPER)

Unit—I

Entrepreneurship : Definition of Entrepreneur, Types of Entrepreneurs. Financial Institutions and Govt. Policies for SSIs, Corporate Social Responsibility, Sick Industries, Reasons for Sickness. Remedies for Sickness.

Unit—II

Creativity and Entrepreneurial Plan : Idea Generation, Screening and Project Identification, Creative Performance, Project Planning, Evaluation, Monitoring and Control, SEgmentation. Targeting and Positioning of Product.

Unit—III

Nature and significance of Business Environment, Micro and Macro Environment, Impact of Political, Legal, Socio-Cultural, Economical, International and Technological Environment.

Unit—IV

Process of Environmental Scanning ETOP Study, Situational Analysis : SWOT Analysis Multinational Corporations (MNC) and its role.

PROJECT WORK (SIXTH PAPER)

The project work is designed to train the students, in tackling various industrial problems. Each student in sixth semester shall be required to work on specific problem relating to the organization, weaving processing or preparation of various schemes collect necessary data and prepare detailed project report which shall be evaluated and awarded marks. These marks are taken for final exams.