

**BHARATHIAR UNIVERSITY (CBCS PATTERN)**

**B.Sc. COSTUME DESIGN AND FASHION**

**(For the students admitted during the academic year 2014-2015 Batch and onwards)**

**SCHEME OF EXAMINATION - CBCS PATTERN**

Part	Study Components	Course Title	Ins. hrs / week	Examinations				Credit
				Dur.Hrs.	CIA	Marks	Total Marks	
<b>Semester I</b>								
I	Language-I		6	3	25	75	100	4
II	English-I		6	3	25	75	100	4
III	Core Paper I- Fundamentals of Apparel Designing		4	3	25	75	100	4
	Core Practical I – Fundamentals of Apparel Designing Practical		4	3	40	60	100	4
	Core Paper II - Principles of Pattern Making		4	3	25	75	100	4
	Allied : I Basic Illustration- Practical		4	3	20	30	50	2
IV	Environmental Studies #		2	3	-	50	50	2
<b>Semester II</b>								
I	Language-II		6	3	25	75	100	4
II	English-II		6	3	25	75	100	4
III	Core Practical II – Fashion Sketching		4	3	40	60	100	4
	Core Practical III – Children’s Apparel Practical		5	4	40	60	100	4
	Core Paper III – Care and Maintenance of Textiles		3	3	20	55	75	3
	Allied : II Sewing Technology		4	3	25	75	100	4
IV	Value Education – Human Rights #		2	3	-	50	50	2
<b>Semester III</b>								
III	Core Paper IV - Historic Costumes & Textiles of India		4	3	25	75	100	4
	Core Paper V –Fashion Designing		5	3	20	55	75	3
	Core Practical IV – Fashion Designing Practical		4	3	20	30	50	2
	Allied : III Fashion and Clothing Psychology		4	3	25	75	100	4
	Core Paper VI – Fiber to Fabric		5	3	25	75	100	4
	Core Practical V – Fiber to Fabric -Practical		3	3	20	30	50	2
IV	Skill based Subject -Basic Draping Practical		3	3	30	45	75	3
	Tamil @ / Advanced Tamil# (OR) Non-major elective - I (Yoga for Human Excellence)# / Women’s Rights#		2	3	50	50	50	2

<b>Semester IV</b>							
III	Core Practical VI – Women’s Apparel Practical	5	4	40	60	100	4
	Core Paper VII – Fabric Structure and Design	5	3	25	75	100	4
	Core Practical VII - Fabric Structure and Design - Practical	3	3	20	30	50	2
	Core Paper VIII- Textile Processing	4	3	20	55	75	3
	Core Practical VIII- Textile Processing- Practical	3	3	20	30	50	2
	Allied Paper IV Garment Quality and Cost Control	5	3	25	75	100	4
	15 Days Internship in any Textile Processing Unit						
IV	Skill based Subject -Surface Embellishments Practical	3	3	20	30	50	2
	Tamil @ /Advanced Tamil # (OR) Non-major elective -II (General Awareness #)	2	3	50		50	2
<b>Semester V</b>							
III	Core practical IX - Men’s Apparel Practical	5	4	40	60	100	4
	Core Paper IX - Accounting and Business Management	5	3	20	55	75	3
	Core Paper X - Computers in the Garment Industry	4	3	20	55	75	3
	Core Practical X - Computer Aided Design (CAD) Practical-I	5	3	20	30	50	2
	Core Paper XI – Textile Finishing	5	3	25	75	100	4
	<b>Elective –I %</b>	3	3	-	-	50	2
IV	Skill based Subject -Dyeing and Printing Methods	3	3	20	55	75	3
<b>Semester VI</b>							
III	Core paper XII – Home Textiles	6	3	25	75	100	4
	Core Practical XI- Computer Aided Design (CAD) Practical-II	6	3	20	30	50	2
	Core Paper XIII - Knitting	5	3	20	55	75	3
	Core Practical XII - Knitting Practical	3	3	20	30	50	2
	Elective –II	4	3	20	55	75	3
	Elective –III	3	3	25	75	100	4
IV	Skill based Subject -Fashion Portfolio Presentation	3	-	-	-	75*	3
V	Extension Activities @	-	-	50	-	50	2
	<b>Total</b>					3500	140

\* For Viva: 20% marks & report: 80% marks.

@ No University Examinations. Only Continuous Internal Assessment (CIA)

# No Continuous Internal Assessment (CIA). Only University Examinations.

**% Elective – I Theory 25/75 Marks, Practicals 40/60 Marks**

List of Elective papers (Colleges can choose any one of the paper as electives)		
Elective – I	A	Textile Printing Practical
	B	Fabric Production and Processing
	C	Entrepreneurial Development
Elective – II	A	Apparel Marketing
	B	Apparel Production Management
	C	Business Finance
Elective - III	A	Organisation of Garment Unit
	B	Export Analysis and Documentation
	C	Apparel Quality Management

**SEMESTER-I - Core Paper-I**  
**FUNDAMENTALS OF APPAREL DESIGNING**

**UNIT-I**

Parts and functions of a single needle machine, essential tools – cutting tools, measuring tools, marking tools, general tools, pressing tools, seams and seam finishes – types, working of seams and seam finishes Hems – types, stitches used.

**UNIT-II**

Fullness- definition, types. Darts, tucks, pleats, flares and godets, gathers and shirrs, frills or ruffles, flounces, facings – bias facing, shaped facing and decorative facing. Binding – single bias binding, double bias binding.

**UNIT – III**

Plackets – definition, characteristics of a good placket, types – inconspicuous placket and conspicuous plackets. Method of constructing the same. Fasteners – conspicuous (Button and button-holes, button loops, button with holes, shank buttons, eyelets and cords). Inconspicuous (press buttons, hooks and eyes, zips).

**UNIT – IV**

Sleeves – definition, types, set-in-sleeves – plain sleeve, puff sleeve, bishop sleeve, bell, circular. Modified armhole – squared armhole. cap sleeve and Magyar sleeve. Sleeve and bodice combined – raglan, kimono and dolman. Yokes – types, simple yoke, yoke with fullness within the yoke, yoke supporting/ releasing fullness.

**UNIT-V**

Collars – definitions, types, peter pan, scalloped, puritan, sailor, square, rippled, full shirt collar, open collar, Chinese, turtle neck, shawl collar pockets – types – patch pocket, bound pocket, pocket in a seam, front hip pocket.

**REFERENCE:**

1. Practical Clothing Construction – Part I and II, Mary Mathews, Cosmic Press, Chennai (1986)
2. The Complete Book of Sewing – Dorling Kindersley Limited, London (1986)
3. Sewing and Knitting – A Readers Digest, step- by – step guide, Readers Digest Pvt Ltd, Australia.

**SEMESTER-I Core Practical-I**  
**FUNDAMENTALS OF APPAREL DESIGNING PRACTICALS**

1. Preparation of samples for seam (any 5)-plain, Top Stitched, Flat fell, piped seam.
2. Preparation of samples for seam finishes(any 3)- overcast,Hem, Edge stitched, bound.
3. Preparation of samples for fullness-darts, tucks (any 3)-pin, cross, group tucking with scalloped effect, Pleats (any 3)-knife, box, kick, gathering by machine, elastic. Ruffles- single, double.
4. Preparation of samples for facing and binding-bias facing, shaped facing, binding.
5. Preparation of samples for plackets and fasteners-continuous, bound, faced and zipper plackets, button and buttonhole, press button, hook and eye.

6. Preparation of samples for sleeves-plain sleeve, puff sleeve (any one type), raglan or cap sleeve.
7. Preparation of samples with yoke –simple yoke, yoke supporting fullness.
8. Preparation of samples for collar - peter pan collar , shirt collar,
9. Preparation of samples for pocket-patch pocket

## **SEMESTER-I Core Paper-II PRINCIPLES OF PATTERN MAKING**

### **UNIT-I**

Body measurement –importance, preparing for measuring, ladies measurements, boys and men's measurements. Standardizing body measurements –importance, techniques used. Relative length and girth measures in ladies /gentlemen  
Preparation of fabric for cutting –importance of grain in cutting and construction, steps in preparing the fabric for cutting.

### **UNIT-II**

Pattern making –method of pattern making – (Drafting and draping),merits and demerits. Types of paper patterns (Patterns for personal measurements and commercial patterns)  
Principles of pattern drafting . Pattern details, steps in drafting basic bodice front and back and sleeve.

### **UNIT-III**

Styles created by shifting of blouse darts , adding fullness to the bodice, converting darts to seam and partial yokes and incorporating darts in to seams forming yokes.  
Fitting - Standards of a good fit , steps in preparing a blouse for fitting , checking the fit of a blouse, solving fitting problems in a blouse ,fitting techniques.

### **UNIT- IV**

Pattern alteration –importance of altering patterns, general principles for pattern alteration, common pattern alteration in a blouse.  
Pattern grading –definition , types , manual –master grades ,basic front ,basic back basic sleeve, basic collar and basic grading.

### **UNIT-V**

Pattern layout- definition, purpose, rules in layout, types of layouts for length wise stripped designs, fabric with bold design, asymmetric designs, one way designs. What can be done if cloth is insufficient , fabric cutting ,transferring pattern marking, stay stitching, ease stitching.

### **Reference;**

Practical clothing construction -part I and part-II Mary Mathews, cosmic press Chennai (1986)

Pattern Grading for women's clothing, The technology of sizing –Gerry cooklin ,Blackwell Science Ltd (1990)

Zarapker system of cutting –zarapker. K. r., Navneet publications Ltd.

**SEMESTER I ALLIED PAPER I  
BASIC ILLUSTRATION – PRACTICAL**

**Unit I**

Lines and line drawings – object drawing and perspective view drawings, enlarging and reducing motifs.

Learning the usage of various drawing and sketching mediums- pencils, ink, charcoal, brushes, crayons, water color and poster colors.

**Unit II**

Drawing a stick figure for both normal and fashion figure. Forming a fleshy figure over a stick figure.

**Unit III**

Dividing the figure into various parts using lines like plumb line, center front line, Princess line, waistline, side seam, armholes, jewel neckline, panty line, bust line etc., Practicing the art of creating textures.

**Unit IV**

Illustrating pattern details- pockets, sleeves, yokes, skirts, trousers, tops etc.,  
Illustrating different type of ornaments and accessories.

**Unit V**

Illustrating details of ruffles, cowls, shirring, smocking, quilting, draping, gathers, pleats, frills and flounces.

Basic concept and types of silhouette.

**RERERENCES:**

1. Fashion Design Drawing & Presentation, Ireland Patrick John.
2. Fashion design Illustration: Children, Ireland Patrick John,
3. Fashion Design Illustration : Men, Ireland Patrick John
4. Fashion Design illustrations, Ritu
5. Foundation in fashion design and illustration – Julian Seaman.

## **SEMESTER II CORE PRACTICALS II FASHION SKETCHING**

### **Unit I**

#### **Developing illustrations from the pictures of magazine:**

Analyzing a normal figure into fashion figure – front face to be done using pictures from magazines, analyzing profile using of a normal figure into fashion figure and analyzing back of a normal figure into fashion figure using magazine.

### **Unit II**

Creating illustrations with various garment styles for Men, Women and Children – for casual wear, party wear and sports wear.

### **Unit III**

Drawing the stylized figures of Men, Women and Children (using 10 heads or 12 heads).

### **Unit IV**

Drawing garments for different seasons – summer, winter, autumn and spring – for Men, Women and Children.

### **Unit V**

Men and Women illustration on the background of party and office, children illustration on the background of party and picnic.

### **RERERENCES:**

1. Fashion Design Drawing & Presentation, Ireland Patrick John.
2. Fashion design Illustration: Children, Ireland Patrick John,
3. Fashion Design Illustration : Men, Ireland Patrick John
4. Foundation in fashion design and illustration – Julian Seaman.
5. Fashion Sketch Book, Fair child publication, New York

### **Semester –II Core Practical -III Children’s Apparel Practical**

Designing, drafting and constructing the following garments for the features Prescribed

List the measurements required and materials suitable

Calculate the cost of the garment

Calculate the material required-Layout method and direct measurement Method

1. Bib- Variation in outline shape
2. Panty-plain or plastic lined panty
3. Jabla- without sleeve, front open (or) Magyar sleeve, back opens
4. Baba suit- knicker with chest piece attached (or) Romper
5. A-Line petticoat- double pointed dart, neck line and arm hole finished with

- facing(or)petticoat with gathered waist  
6.Summer frock- with suspenders at shoulder line, without sleeve/collars(or)  
Angel top with raglan sleeve, fullness at neck line  
7.Yoke frock- yoke at chest line, with open, puff sleeve, gathered skirt9OR0 frock-  
with collar, without sleeve, gathered/ circular skirt at waist line(or)  
Princess line frock  
8. Knicker- elastic waist, side pockets  
9. Shirt- open collar, with pocket

Reference:

- 1.Practical Clothing Constructing-Part I and II, Mary Mathews, Cosmic Press, Chennai (1986)
2. Zarpker System of Cutting- Zarpker. K. R, Navneet Publications ltd.
- 3.Practical cutting and tailoring part II Eshwasri Anwahi, Lakhraj Hans R.B Publications, Delhi

**SEMESTER-II      CORE PAPER –III**  
**CARE AND MAINTENANCE OF TEXTILES**

UNIT-I

Water- hard and soft water, methods of softening water.

Laundry soaps – Manufacture of soap ( Hot process , cold process ), composition of soap types of soap, soap less detergents , chemical action , detergent manufacture , advantages of detergents

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UNIT-II

Finishes – Stiffening Agents – Starch (cold water and hot water) , Other stiffening agents, preparation of starch .

Laundry blues , their application .

UNIT-III

Laundry equipment – for storage, for steeping and Washing – Wash board, suction washer, wash boiler, washing machine.

Drying equipments – out door and indoor types .

Irons and ironing board – types of iron (box, flat , automatic, steam iron) . Ironing board – different types.

UNIT-IV

Principles of washing – suction washing, washing by kneading and squeezing , washing by machine - Process details and machine details.

Laundering of different fabrics – cotton and linen, woolens, coloured fabrics, silks, rayon and nylon.

UNIT-V

Special types of Laundry – water proff coats, silk ties, leather goods, furs, plastics, lace.

Dry cleaning – using absorbents , using grease solvents.

Storing – points to be noted.

Stain removal – food stains, lead pencil, lipstick, mildew, nose drops, paint ,perfume, perspiration / mildew, tar, turmeric and kum- kum.

Care labels – washing, bleaching, Drying, ironing and different placements of label in garments.

References;

1. Textiles fabrics and their Selection – Wingate I B, Allied publishers Ltd, Chennai.
2. Fundamentals of Textiles and their Care- Susheela Dantyagi , Orient Longmann Ltd (1980).
3. Family Clothing – Tate of Glession , John Wiley & Sons I n c, Illinois.
4. Household Textiles and Laundry Work – Durga Duelkar , Amla Ram & Sons, Delhi

## **SEMESTER-II ALLIED PAPER II SEWING TECHNOLOGY**

### **UNIT-I**

Sewing Machineries- Classification of sewing machines, parts functions of single Needle machine, over lock machine, bar tacking machine, button Hole making machine, button fixing machine, blind stitching Machine, fabric examining machine. Special attachments, care and maintenance, Common problems and remedies

### **UNIT-II**

Stitching mechanism- Needles, bobbin and bobbin case, bobbin winding, loops and loop Spreader, upper and lower threading, auxiliary hooks, throat plates, takeups, tension discs- upper and lower thread tension, stitching auxiliaries, pressure foot and its types, Feed mechanisms - drop feed, differential fed, needle feed, compound feed, unison feed, puller feed.

### **UNIT-III**

Cutting technology – definition, function, scope. Cutting equipment and tools , vertical reciprocity cutting machine, rotary cutting machine band knife cutting machine, die cutters. Types of spread and its quality, spreading equipment and tools used for spreading, spreading methods.

### **UNIT – IV**

Marking methods, positioning marking types of markers, efficiency of a marker plan, requirements of marker planning.  
Pressing Equipments – purpose, pressing equipments and methods – iron, steam press, steam air finisher, steam tunnel, special types – pleating, permanent press.

### **UNIT – V**

Sewing federal standards for stitich and stitch classification, federal standards for seam and seam classification , fabric sewability, Sewing threads- types, essential qualities of a sewing thread, Manufacturing process of a cotton and synthetic threads, twisting process.



Reference:

1. The Technology of Clothing Manufacture – Harold Carr and Barbara Latham, Blackwell Science (1994)
2. A complete guide for sewing – Coles M Sew, Heinemann Professional Publishing, Singapore.
3. Reader's digest Sewing guide, Complete Guide to Sewing 13<sup>th</sup> Edition, The Reader's Digest Association Inc, Pleasant Ville.

**SEMESTER-III      CORE PAPER IV**  
**HISTORIC COSTUMES AND TEXTILES OF INDIA**

UNIT-I

Beginning of Costume, Growth of Dress out of painting, cutting etc...,  
Study of dyed and printed textiles of India –Bhandhani, patola , ikkat, kalamkari- in all the above types and techniques used.  
Study of woven textiles of India – Dacca Muslin, Banarasi/ Chanderi brocades, baluchar, himrus and amrus, Kashmir shawls, pochampalli , silk sarees of Kancheepuram.

UNIT-II

Costumes of India – Traditional Costume of different States of India  
Tamil Nadu , Kerala , Andhra Pradesh ,Karnataka ,Assam, Orrisa, Bihar, Mizoram, ,Nagaland, W.Bengal,

UNIT-III

Traditional Costume of different States of India;  
Maharashtra, Rajasthan, Haryana, Himachal Pradesh, Uttarpradesh, Jammu and Kashmir, Gujarat, Madhyapradesh.

UNIT-IV

Indian Jewellery – jewelleries used in the period of Indus valley civilization ,Mauryan period , Gupta Period , the Pallava and Chola Period ,Symbolic Jewellery of South India,Mughal period. Temple Jewellery of South India,Tribal jewellery

UNIT-V

Traditional embroideries of India – Origin ,Embroidery stitches used –embroidery of Kashmir , Phulkari of Punjab ,Gujarat – Kutch and Kathiawar, embroidery of Rajasthan , Kasuti of Karnataka ,Chickenwork of Lucknow, Kantha of Bengal – in all the above – types and colours of fabric /thread.

Reference;

1. Indian Jewellery – M.L Nigam, Lustre Press Pvt Ltd ,India (1999)
2. Indian Costume –G.H Ghosrye, Popular books Pvt Ltd
3. The costumes and textiles and India – Jamila Brij Bhushan, D B Taraporevala Sons & Co, Bombay (1958)
4. Costumes of India –Dorris Flyn, Oxford &IBH Publishing Co ,Delhi (1971).
5. Costumes of India and Pakistan – Das S.N , DB Taraporevala Sons and co, Bombay(1956).

### **Semester III Core Paper-V FASHION DESIGNING**

#### **UNIT I**

Terms related to the fashion industry – fashion, style, fad, classic, and collection, chic Custom made , mannequin , fashion , show, trend, forecasting, high fashion, fashion cycle, haute couture, couture, couturier, fashion director, fashion editor, line, knock-off avant garde, bridge, buying house, apparel, fashion merchandising, pre – a – porter, sample.

#### **UNIT II**

Design- definition and types – structural and decorative design, requirements of a good structural and decorative design. Elements of design – line, shape or form, colour , size and texture. Application of structural and decorative design in a dress, selection and application of trimmings and decorations. Fashion accessories- shoes, handbags, hats, ties – different types/ shapes.

#### **UNIT II**

Principles of design- balance – formal and informal, rhythm- through repetition, radiation and gradation, emphasis, harmony and proportion. Application of principles of design in a dress.

#### **UNIT III**

Colour- definition, colour theories- prang colour chart and munsell colour system, Dimensions of colour- hue, value, and intensity. Standard colour harmonies- application in dress design. Colour in principles of design- application of the same in dress design.

#### **UNIT IV**

Designing dresses for unusual figures – becoming and unbecoming – for the following figure types. Stout figure, thin figure, slender figure, narrow shoulders, broad shoulders, round shoulders, large bust, flat chest, large hip, large abdomen, round face, large face, small face, prominent chin and jaw, prominent forehead.

#### **UNIT V**

Wardrobe planning for different age groups, factors influencing wardrobe selection, Fashion and season, Designing dresses for different occasions – business meetings, parties/ dinners, evenings/leisure hours, marriage functions, sports, uniforms for civil service, airhostess, hoteliers, schools – girls and boys (school, high school).

#### **Reference:**

1. Fashion Sketch Book – Bina Abling, Fair Child Publications, New York
2. Strategies for Women – Judith Rasband, Delmar publishers London
3. Fundamentals of Textiles and their Care- Susheela Dantiyagi, 5<sup>th</sup> edition, . Orient Longman Ltd New Delhi
4. Inside the Fashion Business- Heannette A Jarnow et-al, macmilan Publishing Company, New York.
5. Art and Fashion in Clothing Selection – Mc Jimsey and Harriet, Iowa State University Press, Iowa.

**Semester – III Core Practical -IV**  
**FASHION DESIGNING – PRACTICAL**

1. Prepare the following Charts
  - a. Prang colour chart
  - b. Value Chart
  - c. Intensity Chart
  
2. Illustrate garment designs for the Elements of Design
  - a. Line
  - b. Colour
  - c. Texture
  - d. Shape or form
  - e. Size
  
3. Illustrate garment designs for the Principles of Design
  - a. Balance in dress
  - b. Harmony in dress
  - c. Emphasis in dress
  - d. Proportion in dress
  - e. Rhythm in dress
  
4. Illustrate the colour harmony in dress design
  - a. Monochromatic colour harmony
  - b. Analogous colour harmony
  - c. Complimentary colour harmony
  - d. Double complementary colour harmony
  - e. Split complementary colour harmony
  - f. Triad colour harmony
  
5. Application of colour and principles of design in dress
  - a. Harmony through colour
  - b. Emphasis through colour
  - c. Proportion through colour
  - d. Rhythm through colour
  - e. Balance through colour
  
6. Designing dresses for figure irregularities- becoming and unbecoming Stout figure, thin figure, slender figure, narrow shoulders, broad shoulders, round shoulders, large bust, flat chest, large hip, large abdomen, round face, large face, small face, prominent chin and jaw, prominent forehead.

### **SEMESTER-III ALLIED PAPER III FASHION AND CLOTHING PSYCHOLOGY**

#### **UNIT-I**

Factors influencing fashion changes –Psychological needs of fashion , Social psychology of Fashion , technological , economical , political ,legal and seasonal influence .role of costume as a status symbol , Personality and dress, cloths as sex appeal, cultural value Fashion cycles, repetition of fashion .

#### **UNIT-II**

Fashion evolution – Fashion cycles , Length of cycles , consumer groups in fashion cycles – fashion leaders , fashion innovators, fashion motivation , fashion victim, fashion victims , Fashion followers .Adoption of Fashion – trickle down , trickle up and trickle across theory .Fashion forecasting – market research , evaluating the collection , Fashion services and resources ( fashion services ,Colour services ,video services , News letter services, web sites , Directories and references ),Design- Historic and ethnic costumes.

#### **UNIT-III**

Visual merchandising of fashion , types of displays – window displays , interior displays , Elements of display – the merchandise , mannequins and forms , props , signage , lighting Merchandising presentation – tools and techniques- back drop, forms, fixtures .

Fashion show- Definition , planning ,budgeting, location, timings, selection of models, collection ,set design ,music , preparing the commentary , rehearsal .

#### **UNIT-IV**

Understanding Fashion designer – types – classicist, idealist, influenced, realist, thinking poet. Indian Fashion designers –Haute couture – Rohit Khosla, Gitanjal kashyap , hemant Trivedi, J.J Valaya ,James ferrerira, Ritu Kumar ,Rohit bal, Tarun Tahiliani Minimalists- Himanshu and sonali sattar , sangeethe Chopra, Wendell Rodricks.

Village India- Bhamini Subramaniam, Anju modi, Indiar, Broker, Madhu Jain.

Studio line – Bhairavi jaikishan ,Kishan Mehta ,Ravi Bajaj ,Ritu beri, Rockys.

#### **UNIT-V**

World fashion centers –France, Italy, America, Fareast.

Contributions of well known designers from France, Italy, America, Britain and Fareast Countries.

#### **References;**

1. Retail Fashion promotion and Advertising – Drake et-al , Macmillan publications company ,new york.
  2. Fashion –From concept to consumer – Gini Stephens Frings , 6<sup>th</sup> edition, prentice Hall (1999).
  3. Inside the fashion business –Bennett, Coleman & o ,Mumbai(1998).
- Art and Fashion in clothing selection – Harriet T ,Mc Jimsey, The Iowa state university press,Ames ,Iowa (1973).

### **SEMESTER-III CORE PAPER VI FIBRE TO FABRIC**

#### **UNIT-I**

Introduction to the field of textiles- classification of fibres –natural and chemical – primary and secondary characteristics of textile fibers.

#### **UNIT-II**

Manufacturing process ,properties and uses of natural fibres – cotton ,linen ,Jute , pineapple ,hemp ,silk , wool, hair fibers, man-made fibres –Viscose rayon ,acetate rayon , nylon, polyester, acrylic.

#### **UNIT-III**

Spinning –Definition ,Classification – Chemical and mechanical spinning –blending , opening, cleaning ,doubling ,carding ,combing ,drawing ,roving ,spinning.

Yarn classification – definition , classification – simple and fancy yarns , Sewing threads and its properties.

#### **UNIT-IV**

Weaves – weaving mechanism, parts of a loom and basic process, basic weaves –plain, twill, satin.

Fancy weaves- pile, double cloth, leno, swivel, dobby and jacquard.

#### **UNIT-V**

Non-Wovens- felting, fusing, bonding ,lamination ,netting, braiding and calico,tatting and crotcheting.

References;

1. Textiles –fibre to fabric, Corbmann B.P, International student's edition, Mc Graw Hill 2. Book company, Singapore 1985.
3. Fabric Science 5<sup>th</sup> edition , Joseph J Pretal , Fairchild Publications ,Newyork 1990.

### **SEMESTER III CORE PRACTICAL V FIBRE TO FABRIC**

Identification of textile fibres

Fibres – Cotton, Silk, Wool, Nylon, Polyester, Lilen, Rayon, Jute.

1. Microscopic Method
2. Flame test.
3. Chemical test.

Testing of yarns/ fabrics

1. counting of the yarn using wrap reel.
2. Counting of the yarn using beesley's balance.
3. Twist of the yarn using twist tester.
4. Determining the weight of the fabric.
5. Determining the fabric count by
  - a. Raveling method

- b. Pick Glass method
6. Course length and loop length of knitted fabric.
7. Colour fastness to water.
8. Test of Shrinkage.
9. Test of Absorbency.

**SEMESTER III      Skill Based Subject**  
**Basic Draping-Practical**

**List of Experiment:**

1. Introduction to draping and dress forms
2. Draping basic front and back
3. Draping basic skirts
4. Draping yokes, Shirt yoke and midriff yoke
5. Draping collars- Peter pan, Mandarin and Shirt Collar

**SEMESTER IV CORE PRACTICAL VI**  
**WOMEN'S APPAREL PRACTICAL**

Designing, drafting and constructing the following garments for the features prescribed

List the Measurements required and Materials suitable

Calculate the cost of the garment

Calculate the material required –Layout method and Direct measurements method

1. saree Petticoat- Six Panel , Decorated bottom.
2. Skirts – Circular/umbrella/panel with style variations.
3. Blouse- front open ,Fashioned neck, Waist band at front , with sleeve.
4. Salwar (or) Churidhar (or) Parallels (or) Bell Bottom
5. Kameez – with /without slit, with or without flare ,with /without opening ,with or without panels, with /without yoke.
6. Nightie –With yoke, front open , with sleeve , full length.
7. Ladies pant- waist band , zip attached ,tight fitting / parallel pants.
8. Short kurta / top – Decorative / surface design in tailored placket, with or without collar.

**Refrence;**

1. Scientific garment quality –K M Illege and Sons , Plot No. 43 , Somuvar Peth pune 411011
2. Easy cutting –Juvekar commercial Tailors Corporation p vt 166 Dr. Ambedkar Road dadar.
3. Commercial system of cutting - Juvekar commercial Tailors Corporation p vt 166 Dr. Ambedkar Road dadar.
4. Zarapker system of cutting –K.R Zarapker ,Navneet publication ltd.
5. Dress making- Smt Thangam Subramaniam Bombay Tailoring and embroidery college ,32
6. North park street ,Ambattur , channi.
7. Pratical clothing construction – Part I and II Mary Mathews ,cosmic Press Chennai.

**SEMESTER-IV      CORE PAPER VII**  
**FABRIC STRUCTURE AND DESIGN**

**Unit-I**

Elements of woven design, Methods of fabric representation, draft and lifting plan, construction of elementary weaves – plain, wrap rib, weft rib, twill, modification of twills, satin and sateen weaves – their derivatives.

**UNIT-II**

Ordinary and brighten honey comb, its modification, huck a back and its modifications, crepe weaves, mock leno.

**UNIT-II**

Extra warp and extra weft figuring – single and two colours, planting, backed fabric, warp and weft backed fabrics.

**UNIT-IV**

Pile fabric – Formation of pile – weft pile – plain back, twill back – length, density and fastness of pile – corduroy weft plush. Warp pile – Terry pile, with the aid of wires, face to face warp pile.

**UNIT-V**

Double cloth –classification, self stitched – face to back, back to face, both. Centre stitched – warp and weft. Interchanging double cloth.

**References;**

- 1.Watson's textile design and colour. Grosichkli Z Newness, Butter worths, London 1980.
- 2.Watson's advanced textile design, Grosichkli Z Newness, Butter worths, London 1989
- 3.Textiles – fibre to fabric, corbmann B P , International students edition, Mc Graw Hill book Co, Singapore 1985.

**SEMESTER-IV      CORE PRACTICAL VII**  
**FABRIC STRUCTURE AND DESIGN PRACTICALS**

**Identification of the following weaves , Design and Draft a peg plan for the same.**

1. Plain weave and its derivatives ( Warp rib, Weft rib)
2. Twill Weave – Right hand twill and Left hand twill.
3. Satin
4. Sateen
- 5.Honey comb Weave
6. Huck a back Weave
- 7.Extra Warp and Weft Figuring.
8. Double cloth.
- 9.Terry pile structures.

**SEMESTER –IV      CORE PAPER VIII**  
**TEXTILE PROCESSING**

**Unit – I**

Typical sequence of processes. Object and methods

Singeing, Desizing, Scouring, Synthetic Fiber Heat setting, Wool carbonizing, Weighting of silk.

Wet processing equipment – kier – J box – pad roll – U box – Roller bed – Conveyor steamer – stenter.

**Unit II**

Mercerization – Theory process - Methods – Chemicals – effects.

Bleaching – Hypo chlorites – Hydrogen peroxide – sodium chlorite.

Equipments and chemicals for bleaching of cotton, viscose, cotton/ viscose

Polyester/ cotton.

Evaluation of bleached fabric – whiteness – absorbency – chemical damage - residues.

**Unit III**

Dyeing – Classification of colorants – fastness properties of dyes

Dyeing – classification of colorants – fastness properties of dyes.

Dyeing machines – fiber, yarn and fabric dyeing machines – loose stock fiber bale – hank package – jigger – winch – HT Beam jet – padding mangles. Garment dyeing machines.

**Unit IV**

Printing styles of printing – direct – discharge – resist styles.

Methods of printing – screen printing – automatic screen printing – roller printing – rotary printing – transfer printing. Fixation and after treatment.

**Unit – V**

Wet processing of Knitted fabric – scouring – Bleaching dyeing – printing calendering.

Shrink controlling - steaming.

Wet processing of polyester, Nylon, silk, wool and their blends.

**References:**

1. Paters R.H. Textile Chemistry” Vol. I,II Textile institute, Manchester 1970.
2. Shenai V.A.” Technology of textile processing” Vol. III, V, Vii, VII Sevale publications, Bombay 1981.
3. Lewis D.M.”Wool Dyeing” SDC publications England 1990.



**SEMESTER –IV      CORE PRACTICAL VIII**  
**TEXTILE PROCESSING- PRACTICALS**

Preparation of samples for Processing

- ☒ Desizing
- ☒ Scouring
- ☒ Bleaching
- ☒ Mercerising

Dye the given fabric using suitable dye

- ☒ Direct Dye
- ☒ Sulphur Dyes
- ☒ Vat Dyes
- ☒ Disperse Dyes
- ☒ Reactive Dyes
- ☒ Acid Dyes
- ☒ Basic Dyes
- ☒ Vegetable Dyes (any one)

**SEMESTER-IV      ALLIED PAPER IV**  
**GARMENT QUALITY AND COST CONTROL**

**UNIT-I**

Definition and Scope of Quality control – establishing merchandising standards- establishing raw material quality quality control specifications – quality control of raw material.

**UNIT-II**

Establishing Processing quality specification – training quality control personnel – the quality standard control – quality control inspection , procedures for processing- quality control of finished garments – Quality control and Government contacts – quality control for packaging , warehousing and shipping – statistical quality control .Sampling plans – industry – wide quality standards .

**UNIT-III**

Function of production control – production analysis – quality specifications – qualitative specifications – scope of apparel manufacturing activity –coordinating Departmental Activities – Distribution of documents and records.

**UNIT-IV**

Type of control forms – basic production systems – whole garment, departmental whole garment, subassembly systems and progressive bundle systems, principles for choosing a production system – evaluating production systems – Flow process grids and charts – basic flow process grids construction – flow process grids for production control.

#### UNIT-V

Functions of cost control , types of costs and expenses – Apparel manufacturing cost categories – sales cost control ,purchasing cost control , production cost control , administration cost control – cost ration policies – the manufacturing budget –cash flow controls – standard cost sheet , break even – charts

#### References;

- 1.Solinger, Jacob, Apparel manufacturing analysis , newyork ,textiles books ,1961.
- 2.Solinger, Jacob, Apparel manufacturing hand book , analysis principles and Practice,Columbia media corp,1988

### **SEMESTER-IV SKILL BASED SUBJECT SURFACE EMBELLISHMENT PRACTICALS**

Prepare samples for the following

1. Hand embroidery – 20 stitches -10 samples
2. Traditional embroidery -Embroidery of Kashmir ,Phulkari of Punjab ,Gujarat – Kutch embroidery, embroidery of Rajasthan , Kasuti of Karnataka ,Chickenwork of lucknow, Kantha of Bengal.
3. Machine Embroidery- 3 samples.
4. Smocking -3types

### **SEMESTER V CORE PRACTICAL IX MEN'S APPAREL PRACTICAL**

Designing, drafting and constructing the following garments for the features Prescribed

List the measurements required and materials suitable

Calculate the cost of the garment

Calculate the material required – layout method and direct measurement method

1. S.B.Vest – with/ without collar, button attached, sleeveless
2. Slack shirt – full open, shirt collar, patch pocket,
3. Nehru kurtha –stand collar, side pocket, half open
4. Pyjama- Elastic /Tape attached waist.
5. Pleated trousers – pleats in front, Darts at back, side pocket, fly with button /zip.
6. T-Shirt – open collar, zip attached
7. Bermudas –patch pocket

**Reference;**

1. Scientific garment quality – K M Illege and sons, Plot no 43, somuvar peth, pune, 411011
2. Easy cutting – Juvekar, commercial tailors corporation pvt ltd, 166, Dr.Ambedkar Road,Dadar
3. Commercial system of cutting - Juvekar, commercial tailors corporation pvt ltd, 166, Dr.Ambedkar Road,Dadar
4. Zarpker system of cutting – K R Zarpker Navneet Publications ltd
5. Dress making – Smt Thangam Subramaniam, Bombay tailoring and embroidery college, 32 north park street,ambattur, Chennai
6. Practical clothing construction – Part I and II, Mary Mathews, cosmic press, Chennai

**SEMESTER V      CORE PAPER –IX**  
**ACCOUNTING AND BUSINESS MANAGEMENT**

Unit I

Accounting concepts and conventions –rules of accounts – importance of accounting – nature and scope of accounting – double entry system – advantage – difference between double entry and single entry

Unit II

Journal, ledger, and Trial balance, subsidiary books – purchase book, sales books, purchase returns book, sales returns book and cash book with single, double and triple column cash book

Unit III

Final accounts – trading and profit and loss A/C and balance sheet with simple adjustments

Unit IV

Cost accounting – elements of cost, classification of cost – preparation of simple cost sheet (problem) – accounting for overheads – classification of overheads, allocation and apportionment of overheads – reapportionment of service department cost to production department, absorption of overheads

Unit V

Nature and objectives of business – legal forms of business of ownership – sole trader, partnership, company and co-operative societies –advantages and limitations

Note: problems – 70 marks, theory – 30 marks

**References**

- 1.Introduction to accountancy – T S Grewal
- 2.Principles of accountancy – N Vinayagam, P L Main, K L Nagarajan
- 3.Cost accounting – S P Jain and K L Narang
- 4.Cost and management accounting – S N Maheswari
- 5.Business management – Dinker Pagare
- 6.Business Organisation and management – Y K Bhushan

## **SEMESTER-V CORE PAPER- X COMPUTERS IN THE GARMENT INDUSTRY**

### **UNIT-I**

Classification of computers, computer generations, computer specification ,organization of computer sections .Types of storage devices ( primary and secondary) ,input devices , output devices .

### **UNIT-II**

Role of computers in fashion industry – Information flow – CAD, CAM,CIM,CAA,PDC – Definition and functions.  
Computers in production planning and production scheduling ,computerized colour matching system.

### **UNIT-III**

CAD in designing  
Textile designing – Weaving , Knitting and printing.  
Creating embroidery designs.  
Garment designing – 2D and 3D forms .

### **UNIT-IV**

CAD in pattern making and grading – system description – information flow – process involved in pattern making , process involved in pattern grading.

### **UNIT-V**

Computer application in fabric defect checking, laying / spreading, cutting marker planning ,labeling – parts and functions. Computerized sewing machines .

### **References;**

- 1.Clothing Technology – Hannelore Eberle et –al, Verlaag Europa – Lehrmittel, Vollmer GmbH & Co 4287, Haan – Gruilen.
- 2.Computer Fundamentals – P K Sinha , BPB Publications, Delhi (1992)
- 3.The technology of clothing manufacture – Harold Carr and Barbara Latham, Blackwell Ltd (1994)
- 4.Pattern Grading for Women’s Cloths The Technology of sizing – Gerry Cooklin, Blackwell Science Ltd (1990)

**SEMESTER-V      CORE PRACTICAL - X**  
**COMPUTER AIDED DESIGNING- PRACTICALS-I**

Create the following designs

1. Motifs / small designs.  
Embroidery designs for Kerchiefs , Neck lines  
Chest prints for T-shirts
2. Children's Garments  
Jabla- different styles  
Frocks- different styles  
Middi and Tops - different styles
3. Women's Garments  
Churidhar- different styles  
Full gowns - different styles  
Middi & Tops - different styles  
Princess line Dress- different styles.  
House coats, Aprons, Nighties
4. Men's Garments  
S B vest  
T- Shirt - different styles  
Shirts - different styles  
Kurta pyjama - different styles
5. Create logos for branded companies.
6. Create label for garments / companies

**SEMESTER V    CORE PAPER XI**  
**TEXTILE FINISHING**

**UNIT I**

Production sequence of textile fabrics – flow chart – brief description.  
Finishes – classification – Importance of finishes – application methods

**UNIT II**

Mechanical finishes – methods and applications;  
Aesthetic finishes: Luster – glazed, moiré, schreiner, embossed;  
Drape – crisp and transparent, burnt out, sizing, weighting;  
Texture – sheared,brushed,embossed,plisse,pleated,flocked,embroidered,napped,fulled;

**UNIT III**

Functional finishes – methods and applications –wrinkle free finishes, water repellent finish, flame retardant finish, rot and mildew proof finish, antistatic finish, and soil release finish.

**UNIT IV**

Special purpose finishes – methods and applications – silicone finish, denim finish – stonewash and enzyme wash; fragrance finish, UV protection finish, anti bacterial finish, and phase change finishes.

## UNIT V

Recent trends in finishing – micro encapsulation techniques, nano finishes.  
Environmental pollution during chemical processing of textiles.  
Treatment of textile effluents.

### References:

1. Understanding Textiles 6<sup>th</sup> edition, Billie J.Collier,Phyllis G.Tortora,Prentice Hall Inc.,New Jersey,2001
2. Textiles by Sara.J.Kadolph and Anna .L.Langford,2000.
3. Textile Finishing by V.A.Shenai.
4. Textile Finishing by R.S.Prayag.
5. Functional Finishes by Lewin And Sello.
6. Technology of Finishing by J.T.Marsh.

## SEMESTER-V Skill Based Subject DYEING AND PRINTING METHODS

### UNIT-I

Printing – Introduction to printing , differences between printing and dyeing , preparation of fabric for printing – cotton , linen, polyester, wool and silk, methods of printing, preparation of printing paste, selection of thickening agents.

### UNIT-II

Direct printing : Block printing – Brief History , Preparation of design , Blocks, table, print paste and printing process  
Stencil printing – Brief history , preparation of fabric , stencils (For one or more colour)  
Materials used for preparing stencils, process involved and techniques used .

### UNIT-III

Screen printing – brief history , Flat screen and Rotary screen printing , Preparation of screen , print paste , screen printing process,  
Discharge printing – chemicals used , process involved .

### UNIT-IV

Resist printing : Brief history, Batik printing wax used, Equipments required, process sequence and techniques used.  
Tie and dye – Brief history , Equipments required, process sequence and techniques used.

### UNIT-V

Other printing methods : Ink jet printing, Heat transfer printing , photo printing.

### References:

- 1.Textiles – Ninth edition ,Sara J Radolph and Anna L Langford, Prentice hall, New Jersey (2002).
- 2.Textile processing – J L Smith, Abhishek publications, Chandigarh (2003).
- 3.Textile Chemistry – Peters R H , Vol I, & II, Textile Institute Manchester (1970)

4.Beginners Guide to fabric dyeing and printing – Stuart & Robinson, Technical books,London (1982).

5.Thickening agents and Emulsion thickenings in textile printing – Herbert Barthm, New Delhi (1994).

## **SEMESTER-VI CORE PAPER XII HOME TEXTILES**

### **UNIT I**

Introduction to home textiles, definition, types of home textiles, factors influencing selection of home textiles, recent trends in home textiles

### **Unit II**

Floor and wall coverings – definition, types of floor covering –hard, soft and resilient floor coverings and uses and care and maintenance of floor coverings .Wall covering- definition, uses, care and maintenance of wall coverings.

### **Unit III**

Door and window treatments –definition and parts of door and windows, curtains and draperies –definition and materials used for curtains and draperies .Types of Curtains –draw, tailored, pleated, café, three tier curtains. Types of Draperies – swags. Accessories- rods hook, rails, racks, curtain tape pins.

### **Unit IV**

Soft furnishings for living and bedlinen. Introduction to living and bedroom linens, types-sofa, sofa covers, wall hangings, cushion, cushion covers, upholsteries, bolster and bolster covers, bedsheets, covers, blankets, blanket covers, comfort and comfort covers, bed spreads, mattress and mattress covers, pillow and pillow covers, pads, uses and care.

### **Unit V**

Soft furnishings for kitchen and dining ,types of kitchen linens – kitchen towel, aprons, dish cloth, fridge, grinder and mixie covers, mittens, fridge holders –their uses and care. Types of dining- table mat, dish/pot holders, cutlery holder, fruit baskets, hand towels-uses and care. Bathroom linens –types, uses and care.

### **References**

- 1.Cheryl Mendelson, Home Comforts-the arts and science of keeping home, published by Scriber, New York,2005.
2. Hamlyn octopus, Cushions and Pillows- professional skills –made easy, Octopus publishing group, New York,2001.
3. Magi Mc McCormick Gordon, The ultimate sewing Book 200 sewing ideas for you and your home, Collins and Brown,London,2002.
4. Anne van Wagner Childs Leisure Arts- Inc., Sew no more Home Décor,Arkansas,U.S.A,1993.
5. Mary Mulasi, Garments with style, Chiton Book Company,Pennsylvania,1995.
- 6.Rhoda J.Murphy, House Beautiful-A seasonal guide to decorating with fabric, Quadrille publishing Ltd, New York,1997.

7. Art and craft of fabric decoration-Juliet Bawden, published in London,1994.
8. Dorothy Gates, The essential guide to upholstery ,published in 2000 by Merehurst Ltd, London.
9. Wendy Baker, Curtain and fabric selector,2000,published by Collins and Brown Ltd, London.
10. Susie Johns, Cornucopia of cushions, published by Apple Press,London, 1997.
11. Diana Lodge, Traditional Needle Arts –Quilting , published by Mitchell Beazley,1995,London.
12. Design and make curtains by Heather Luke, published by New Holland publishers,London,1999.

### **SEMESTER-VI      CORE PRACTICAL - XI COMPUTER AIDED DESIGNING PRACTICALS-II**

1. Application of colour harmony in Design
  - Monochromatic colour harmony
  - Analogous colour harmony
  - Complementary colour harmony
  - Double Complementary colour harmony
  - Split complementary colour harmony
  - Triad colour harmony
  - Tetrad colour harmony
  - Neutral colour harmony
2. Applications of Principles of design in dress design
  - Balance –Formal and informal
  - Rhythm – by line movement, gradation, repetition.
  - Emphasis
  - Proportion
  - Harmony
3. Design Garments for the following.
  - Party Wear – Women ,Men, Children.
  - Sports Wear- Tennis, Basket ball/foot ball (men and Women), Golf, any other.
  - Fashion show – Children, men and women
  - Winter Wear - Children, men and women
  - Summer Wear - Children, men and women
  - Spring Wear - Children, men and women
  - School uniforms – Preschool , school, higher secondary and college going students-boys and girls.
4. Prepare pattern for the following.
  - Bib
  - Jabla
  - Knicker
5. Grade the following patterns.
  - Bodice front
  - Bodice back



**SEMESTER-VI CORE PAPER-XIII  
KNITTING**

**UNIT-I**

Knitting – Definition, classification and history, types of knitting- hand and machine ,characteristics of knitted goods.

**UNIT-II**

General terms and principles of knitting technology, machine knitting , parts of machine, knitted loop structure, stitch density.

**UNIT-III**

Weft knitting –classification-circular rib knitting machine, purl, interlock, jacquard-single jersey machine-basic knitting elements-types and functions –knitting cycle,CAM-system-3 way technique to develop design-knit, tuck, miss-effect of stitches on fabric properties.

**UNIT-IV**

Warp knitting-lapping variations-tricot, raschel, simplex and Milanese -kitten raschel-single bar,2 bar, multi bar machines. types of threading, production of nets, curtains, heavy fabrics, elasticized fabrics.

**UNIT-V**

Care and maintenance of knitted material-washing, drying, ironing, storing.

Reference;

- 1.Knitting technology, David spencer, pergamen press, Oxford (1982)
- 2.Principles of knitting, D B Ajonker, Universal publishing corporation.(1998)
- 3.Warp knit elements, Wilkens C U, Wilkens (1997).

**SEMESTER-VI CORE PRACTICAL XII  
KNITTING PRACTICALS**

Identify the given fabric

Methodology used – unravel and graphic representation

- Plain Knit
- Rib Knit – 1x1,2x2
- Interlock
- Pique – any 2 structures
- Tricot
- Raschel

Defect Analysis

- Vertical and horizontal lines
- Holes and cuttings
- Distorted stitches
- Any other

**SEMESTER-VI SKILL BASED SUBJECT  
PAPER –IV FASHION PORTFOLIO PRESENTATION**

Portfolio development and presentation technique;  
To be planned for a season or occasion

Mood board, Story board, Fabric board, colour board – to be presented separately or in a combined form.

Fabric development chart  
Design development chart  
Final presentation  
Number of garments in a collection – 4-6 garments.

**SEMESTER-V ELECTIVE PAPER I - A  
TEXTILE PRINTING-PRACTICALS**

1. Preparation of sample for printing.
  - Cotton
  - Polyester
  - Silk.
2. Preparation of printing paste.
3. Create Design with Block printing – Vegetable/ wooden blocks
4. Create Design for Chest print/ Neck /Yoke designs with Stencil printing.
5. Tie and Dye Designs with any three methods with single/ double/ Multi colours.
6. Batik printing with any three methods with single/ double/ Multi colours.
7. Print a Design using Screen printing methods.

**SEMESTER-V ELECTIVE PAPER I - B  
FABRIC PRODUCTION AND PROCESSING**

**Unit I :**

Fabric forming Techniques – Comparison of weaving and knitting – Principles and Comparison of weft and warp knitting - Classification of machines – Terms and definition of knitting – Basic structures and characteristics – Features of modern knitting machineries.

**Unit II:**

Formation of tuck and miss stitches and their influence on knitting fabrics – Methods and structures – Need and possibilities. Elastomeric yarn types and its effects in knitting – Study of single Jersey and its derivative structures: Pique, Double pique, Lacoste, pearl and Twill. Study of rib and its derivative: Half cardigan, milano rib, Rib waffle and flat back rib. Concept of 2\*2 Rib and rib drop needle. Interlock Derivative: Eight lock, Ottoman Rib, Ponte-Di-Roma, Texipique and Pin tuck. Areal density and production calculation of circular knitting machines.

**Unit III:**

Weaving Definition – Terms related to woven fabric – Classification of Looms – Sequencing of weaving preparation process – Passage of material through plain loom – Important motions of a loom – Parts of a Loom – Introduction to woven fabric Design and their derivatives.

**Unit IV:**

Introduction to Processing – Study of preparative process of dyeing and objectives – Dyes and pigments - Classification – Principles and methods of knitted fabrics – Concept of Tie & Dye methods – Study on garment dyeing.

**Unit V:**

Printing – Comparison of Dyeing and Printing – methods of Printing – study of screen and Rotary Print. Styles of Printing – Study of non conventional printing styles employed in garment printing – Principles and working of garment printing machines. Printing ingredients and model recipe formulation. Need and objectives of finishing – Classification – Brief Study of various mechanical and chemical finishers.

**BOOKS FOR REFERENCE:**

1. D.B. Ajoankar, Knitting Technology, Universal Publishing Corporation, Mumbai 1998.
2. David.J.Spencer, Knitting Technology, Woodhead Publishing Limited, Second Ed, England, 1989.
3. Shenai.V.A, Technology of Bleaching and Mercerising Sevak Publications, Mumbai -31.
4. E.R.Trotman, Textile Scouring & Bleaching , B.I Publications Private Ltd, New Delhi, 1968

**SEMESTER – V      ELECTIVE I - C**  
**ENTREPRENEURIAL DEVELOPMENT**

**Unit I :**

Concept of Entrepreneurship: Definition Nature and Characteristics of Entrepreneurship - Functions and types of Entrepreneurship phases of EDP. Development of women Entrepreneur and rural Entrepreneur – including self employment of women council scheme.

**Unit II:**

The Start – up process, Project Identification – Selection of the product – Project formulation evaluation – Feasibility Analysis, Project Report.

**Unit III:**

Institutional service to Entrepreneur – DIC, SIDO, NSIC, SISI, SSIC, SIDCO, ITCOT, IIC, KUIC and commercial Bank.

**Unit IV:**

Institutional finance to Entrepreneur – IFCI, SFC, IDBI, ICICI, TIIC, SIDCS, LIC and GIC, UTI, SIPCOT – SIDBI and commercial Bank venture capitals.

**Unit V:**

Incentives and subsidies – Subsidied Services – Subsidy for market. Transport – seed capital assistance – Taxation benefit to SSI – role of Entrepreneur in export promotion and import substitution.

**BOOKS FOR REFERENCE:**

1. Entrepreneurial Development – C.B. Gupta and N.P. Srinivasan
2. Fundamentals of Entrepreneurship and small Business – Renu Arora and S.KI.Sood
3. Entrepreneurial Development – S.S.Khanka
4. Entrepreneurial Development – P.SaravanaVel
5. Entrepreneurial Development – S.G.Bhanushali
6. Entrepreneurial Development – Dr.N. Ramu

**SEMESTER-VI ELECTIVE II - A  
APPAREL MARKETING**

**UNIT-I**

Meaning and classification of Marketing ,fashion Marketing ,fashion Market – Size and structure, Marketing environment – Micro and macro marketing environment , Trends in marketing environment .

**UNIT-II**

Marketing Function – Assembling, standardization and Grading and packaging ,product planning and development ,importance of fashion products , Nature of fashion products. The fashion industry and new product development, product mix and range planning, Fashion and related cycles.

**UNIT-III**

Fashion Advertising and preparation of advertising for apparel market , Advertising media used in apparel market – Advantages and limitations, Advertising department – structure and functions , advertising agencies – structure and functions . Advertising Budget.

**UNIT-IV**

Fashion sales promotional programme for apparel marketing , communication in prop motion, Personal selling, point of purchase, sales promotion – Objectives and methods, Marketing Research – Definition, Scope and Process – Areas of research.

**UNIT-V**

Pricing policies and strategies for apparel products, importance of price policies , Functions and factors Influencing pricing- internal and external, pricing strategies for new products, methods of setting prices.

**References;**

1. Marketing- RSN Pillai and Bhagavathi, S Chand and Company Ltd , New Delhi,1987.
2. Marketing management – Dr B K Chatterjee Jaico, Juice publishing house , Bombay 1982.
3. Marketing Principles and methods – Philip C F and Duncon, Irwin Publications.
4. Principles of marketing – back Man T N , Munard H H and Davidson W R, Ronald Press Company Newyork 1970.
5. Fashion marketing – Mike Easey ,Black well Science Ltd,1995.
6. Advertising – C N Sonatakki, Klyani Publishers New Delhi, 1989.

**SEMESTER-VI ELECTIVE II - B  
APPAREL PRODUCTION MANAGEMENT**

**Unit I :**

Nature and scope of management – Management Science/Art – Development of management theory – Scientific management – Henry Foyal’s principles of management.

**Unit II:**

Planning – Meaning and purpose of planning – Steps in planning – Types of planning – Objectives and policies – Objectives, policies, procedures and methods, nature and types of policies – Decision making – Process of decision making – Types of decisions – Problems involved in decision making.

**Unit III:**

Organizing – Types of organization – Organizational structure – Span of control – Committees. Delegation and centralization line & staff relationship – staffing – Sources of recruitment – Selection process – Training methods – Performance appraisal.

**Unit IV:**

Directing – Nature and purpose of directing – Motivation – Discipline – Leadership – Supervision – Communication – Requirements for effective controls – Critical control points and standards.

**Unit V:**

Controlling – Need for co-ordinating – Meaning and importance of control – control process – types of control.

**BOOKS FOR REFERENCE:**

1. O.P.Khanna, Industrial Engineering and Management, Dhanapat Rai Publications, New Delhi(2006).
2. Patrick.J.Montana and Bruce.H.Charnov,Management, Barrows(2000).
3. D.P.Jain, Business Organisation and Management, Vrinda Publications(1999).
4. Harold Koontz and Heinz Weihrich, Essentials of Management, Tata McGraw Hill(1998).

**SEMESTER-VI ELECTIVE II - C**  
**BUSINESS FINANCE**

**Unit I :**

Business Finance: Introduction – Meaning – Concepts – Scope – Functions of finance, Traditional and modern concepts – content of modern finance functions.

**Unit II:**

Financial Plan: Meaning – Concept – objectives – Types – Steps – Significance – Fundamentals.

**Unit III:**

Capitalisation – Bases of Capitalisation – Cost Theory – Earning Theory – Over Capitalisation – Under Capitalisation – Symptoms – causes – remedies – Watered Stock Vs. Over Capitalisation.

**Unit IV:**

Capital Structure – Cardinal Principles of capital structure – Trading on equity – Cost of capital – concept – Importance – Calculation of Individual and composite cost of capital.

**Unit V:**

Sources and forms of Finance: Equity Shares, Preference Share, Bonds, Debentures and fixed deposits – features – advantages and disadvantages.

**BOOKS FOR REFERENCE:**

1. Essentials of Business Finance – R.M.Sri Vatsava
2. Financial Management – SaravanaVel
3. Financial Management – L.Y.Pandey
4. Financial Management – S.C.Kuchhal
5. Financial Management – M.Y.Khan and Jain

## **SEMESTER-VI ELECTIVE III - A ORGANISATION OF GARMENT UNIT**

### **Unit-I**

Entrepreneurship- Meaning definition and types , need for Entrepreneurs, qualities and types of Entrepreneurship. Difference between Entrepreneur and manager.

Management- Definition , Management as a process –Planning ,organizing ,Directing Controlling, Co ordination.

### **Unit-II**

Institutions supporting entrepreneurs- DIC, NSIC ,SISI,SIPCOT, TII,KVIC, CODISSIA, COMMERCIAL BANKS –SBI.

Organizational structure of a garment unit –Hierarchical organization, production planning and control.

### **Unit-III**

Different department in a garment unit – Design department ,Finance department, purchasing department , Production department, Organizing different sections – hierarchy

Personnel involved in all the departments, nature of the job .

### **UNIT-IV**

Factory Design and layout – importance of factory design , factors affecting factory design , Types of buildings, ( single and Multi –storey) –advantages and limitation . Factory layout – Process, Product and combined layout

Design requirement – requirements relating to health, safety and welfare

### **UNIT-V**

Performance of Indian Garment Export, SWOT Analysis Setting up of garment unit for export market ,Export Document ,Export finance- Payment method ,Export shipping

Role of merchandiser in a garment unit

### **Reference;**

1. Principles of management- Dinakar pagare, sultan chand and sons, delhi.
2. Entrepreneurship Development in India – Dr. C.B Gupta , Dr N.P . Srinivasan, sultan Chand and sons delhi 1997.
3. Garment Exports – Darlie O Koshy (1997)
4. Introduction to clothing production management – AJ Chester 2<sup>nd</sup> Edition , Wrenbury Associates Ltd (1998).
5. The technology of clothing manufacture – Harold Carr and Barbara Latham ,Blackwell Science (1994).

## **SEMESTER-VI ELECTIVE III - B EXPORT ANALYSIS & DOCUMENTATION**

### **Unit I :**

Cost estimation of yarn, knitted fabric, dyeing, printing & finishing. Cost estimation for cutting, stitching, checking, forwarding, shipping and insurance –INCO terms & their relationship with costing. Estimation of factory cost for vest, briefs, shorts, T-Shirts, pyjamas, children's wear and women's wear. Various factors to be considered in costing for domestic products & international products.

### **Unit II:**

Introduction – Apparel Export promotion Council and its role – Registration formalities – Registration cum membership certificate – Import Export code – RBI code. Benefits and incentives offered by Government of India to garment export. Role of SEZ and apparel parks in export.

### **Unit III:**

Need, rationale and types of documents relating to goods – Invoice – Packing note and list – Certificate of origin – Certificates related to shipment – Mate receipt – Shipping bill – Certificate of measurement – Bill of lading – Air way bill – Documents related to payment – Letter of credit – Bill of exchange – Letter of hypothecation – Bank certificate for payment – Document related to inspection – Certificate of inspection – GSP and other forms. Importance of insurance of goods in foreign trade – ECGC and its role.

### **Unit IV:**

Import license – Procedure for import license – Import trade control regulation procedure – Special schemes – Replenishment license – Advance license – Split up license – Spares for after sales service license – Code number – Bill of entry.

### **Unit V:**

Pre shipment inspection and quality control – Foreign exchange formalities – Pre shipment documents. Shipment of goods and port procedures – Customs clearance.

### **BOOKS FOR REFERENCE:**

1. Paras Ram, Hand Book of Import and export Procedures



## **SEMESTER-VI ELECTIVE III - C APPAREL QUALITY MANAGEMENT**

### **Unit I :**

Meaning of quality, testing and standard and their importance in apparel industry – Quality terminologies – Sources of international standards.

Quality Parameters of yarn: Yarn evenness & hairiness and their effect on fabric quality. Quality parameters of fabric: Brief study of fabric pilling resistance, bursting strength, colour fastness and dimensional stability. Testing of sewing threads, zippers, fusible interlinings, buttons and fasteners.

### **Unit II:**

Inspection: Incoming and raw material inspection: Fabric inspection – 4-point system. In process/on-line inspection: Advantages – On line inspection during spreading, pattern making, cutting, sewing and ironing.

Final inspection: Sampling plans and AQL charts – Level of final inspection. Packing & packaging quality tests. Care labeling and international care symbols.

### **Unit III:**

Principles of TQM – Deming's PDCA Cycle - KAIZAN concepts – 5 'S' applications in apparel industry. Application of seven QC tools in apparel industry.

### **Unit IV:**

Understanding of ISO 9001:2000 standards: QMS, management responsibility, resource management, product realization and measurement analysis & improvement – Various documents required for ISO 9001:2000 implementation and its contents – Development of quality system manual for garment industry.

### **Unit V:**

Documented procedures required for ISO 9001:2000 implementation – Procedures for internal quality audit – Management review meeting – Certification process – Surveillance audit.

### **Text Book**

Pradeep V Mehta, Managing the Quality in Apparel Industries, New Age International (P) Ltd, New Delhi – 1998 Edition.

### **BOOKS FOR REFERENCE:**

1. D.L.Shah Trust, ISO 9000 Quality Management System, DL Shah Trust.
2. Booth J.E, Principles of Textile Testing, CBS Publishers and Distributors, New Delhi, First Edition.
3. Kothari V.K. Testing and Quality Management, IAFL Publications, New Delhi, First Ed, 1999.