

BU-COMMUNITY COLLEGE CONSULTANCY CENTRE

REVISED SYLLABUS – 2021-22
FOR
DIPLOMA IN APPAREL MERCHANDISING



BHARATHIAR UNIVERSITY
COIMBATORE-641046

BHARATHIAR UNIVERSITY: COIMBATORE

**DIPLOMA IN APPAREL MERCHANDISING
(Community College)**

(for the candidates admitted from the Academic year 2021-22 onwards)

Minimum qualification for admission to Diploma Course in Apparel Merchandising is a pass in Standard X.

SCHEME OF EXAMINATIONS

S.No	Title of the Course	Credits	Maximum Marks
1	Paper I - Textile Science	4	100
2	Paper II - Apparel Merchandising	4	100
3	Paper III - Apparel Quality Assurance	4	100
4	Paper IV - Textile Wet Processing and Testing	4	100
5	Practical I - Pattern Making and Garment Construction	4	100
6	Practical II - Textile Testing	4	100
7	Practical III Computer Aided Pattern Making and Marker Planning	4	100
8	Internship / Apprentice / Teaching Practice / Project*	4	100
	Total	32	800

Question Paper Pattern

Section A: (10 x 2=20 Marks)

Answer ALL the questions

Section B: (5 x 6 = 30 Marks)

Answer ALL the questions either (a) or (b)

Section C: (5 x 10 = 50 Marks)

Answer ALL the questions either (a) or (b)

Duration of examinations for all papers is three hours.

*Minimum Pass Mark: 40 Marks

PAPER I
TEXTILE SCIENCE

Unit:1		
Introduction to textiles - definition: fibre, yarn, fabric, garment, clothing. Classification of textile fibres -Natural (plant, animal and mineral fibres) and Man-made fibres - synthetic (polyester, nylon, acrylic, polypropylene, elastane, etc.) and regenerated (viscose, bamboo, modal, tencel, acetate, lyocell) fibres. Primary and Secondary properties of textile fibres. Identification of textile fibres - manufacturing process. Applications of natural fibres and manmade fibres.		
Unit:2		
Spinning - definition, classification - chemical and mechanical spinning- short staple spinning. Yarn – definition, types - staple fibre yarn and filament yarn, classification- simple and fancy yarns, sewing thread. Weaving - warp and weft, basic weaves- fancy weaves - process sequences - different weft insertion techniques. Non-wovens - web formation, non-woven making - needle punching, melt blown, spun bond and spun lace methods. Applications of non-wovens		
Unit:3		
Knitting- loop structure- Mechanical elements of weft knitting: needles- sinker-Jacks- Cams- Cylinder- Feeder and Take up – their function and operation. Comparison of warp and weft knitting, Machineries and mechanisms. Warp knitting machines – types.		
Unit:4		
Functional finishes-Sizing, Desizing, Singeing, Mercerizing, Scouring Bleaching, Dyeing-Different types of dyes – methods of dyeing - Tie & Dye. Printing - methods of printing. Aesthetic finishes.		
Unit:5		
Introduction to textile testing and quality control. Humidity - Wet and dry bulb Hygrometer, Moisture regain - moisture content - conditioning oven. Fibre tests, Yarn tests, Knitted Fabric - Loop Length - Course Length - Course/inch, Wales/inch - GSM, Woven fabric - Ends/inch - Picks/inch - cover factor - GSM. Testing of colour fastness to washing, rubbing, perspiration, dry cleaning, bleaching, light.		
Reference Books		
1	Textiles and Fashion – Materials, Design and Technology, Rose Sinclair (Ed.), Woodhead Publishing Limited and The Textile Institute, (2015).	
2	Fibres to Fabrics, Bev Ashford, Authorhouse, (2014).	
3	Textiles, Sara.J.Kadolph, Pearson, (2010).	
4	Textiles - Fibre to Fabric, Bernard P. Corbman, McGraw Hill, (1983).	
5	Knitting Technology, David J. Spencer, Elsevier Science, (2014).	
6	Textile Processing and Properties, Tyrone L. Vigo, Elsevier, (1994)	

7	A Practical Guide to Textile Testing, Amutha K, Woodhead Publishing India Ltd., (2016)

PAPER II
APPAREL MERCHANDISING

Unit:1		
Merchandising – Functions of Merchandiser – Raw Materials Arrangement - Approvals – Pattern Approvals – Size set Approvals – Pre Production follow up – Buyer Communication – Reporting – Record maintenance.		
Unit:2		
Estimating, aims of estimating - costing, aims of costing - difference between estimating and costing - types of estimates. Elements of cost - material cost - Labour cost different types of expenses - cost of product - advertisement cost.		
Unit:3		
Material cost -cost of yarn, cost of fabric production, cost of processing width of fabric, and design affecting cost - lot size, and cost of components - cutting cost - making and trim cost [CMT cost]. Simple problems. Programming – fabric consumption calculation – Scheduling – Concepts of scheduling - Types of Scheduling.		
Unit:4		
Market – Target markets – The four Ps – Understanding target markets. Market segmentation – redefining markets – segmentation strategies – segmentation approach. Alternate marketing. Market research.		
Unit:5		
Export Procedures - Import/Export Documentation – FOB, C&F, CIF--Shipping mark– Certificate of Origin- Letter of Credit - Bill of Lading – Export License- Packing list – Commercial Invoice.		
Reference Books		
1	Apparel Merchandising – The Line Starts Here, Jeremy A.Rosenau and David L. Wilson, Bloomsbury Academic, (2014).	
2	Apparel Merchandising, R. Rathinamoorthy and R. Surjit, Woodhead Publishing India Ltd., (2017).	
3	Apparel Merchandising – An Integrated Approach, M. Krishnakumar, Abishek Publications, (2010)	
4	Fashion Merchandising – Principles and Practice, Macmillan Education UK, (2020).	

PAPER III
APPAREL QUALITY ASSURANCE

Unit:1		
Basic concepts of Quality – Meaning of quality - Dimensions of Quality – Quality Planning- Elements of Cost of Quality – Optimum cost performance- Trend analysis- Pareto analysis.		
Unit:2		
Inspection – importance, types. 1. Raw material inspection – Fabric inspection – Sewing threads – Zippers – Buttons-Buckles –Snap fasteners – interlinings. 2. In-process inspection- Patterns – Spreading – Cutting – Sewing – Pressing /Finishing. 3. Final Inspection – Garment Specifications – How much to inspect – 100% inspection – Spot Checking – Arbitrary sampling – statistical sampling - CSP1 – MIL STD 105 scheme– AQL –AOQL – Comparability checks.		
Unit:3		
Implementation of quality control program - Seven Tools of Quality – Check sheet [data collection sheet]-Histogram-Cause and effect Diagram[or Fishbone diagram] – Pareto Diagram – Stratification Analysis – Scatter diagram – Control Chart.		
Unit:4		
Continuous process improvement –Introduction –Input/output process model –Juran’s quality Trilogy – PDCA cycle [Deming wheel]. 5W2H Method – 5S system – Kaizen –Bench marking – Six Sigma Principle – Total Productive Maintenance – Failure Mode Evaluation Analysis.		
Unit:5		
TQM-Quality Assurance -Definitions – Basic concepts – Characteristic – Elements – Principles – Barriers – Benefits. Introduction to quality management system –ISO- ISO 9000 Series of Standards – Implementation of ISO 9000 – Advantages of ISO Certification.		
Reference Books		
1	Quality Assurance for Textiles and Apparel (2 nd Edition), Sara J. Kadolph, Bloomsbury Academic, (2007).	
2	Quality Tools Implementation in Apparel Manufacturing, Pradip V. Mehta, et al., Apparel Resources Pvt. Ltd., (2020).	
3	Apparel Quality – A Guide to Evaluating Sewn Products, Janace E. Bubonia, Fairchild Books, (2021).	
4	Quality Characterisation of Apparel, Subrata Das, Woodhead Publishing, (2009).	

PAPER IV
TEXTILE WET PROCESSING AND TESTING

Unit:1		
Introduction to textile wet processing – sizing – desizing – scouring – bleaching – mercerizing – singeing – dyeing – printing – finishing. Introduction to colouration of textiles – importance of pretreatment – types of pretreatment – selection of machinery and dyeing method.		
Unit:2		
Textile dyes – classification - liquor ratio in dyeing – dyeing of cellulosic textiles – dyeing of wool and silk - dyeing of synthetics – polyester, nylon, acrylic. Garment dyeing. Textile printing – methods – styles – print paste formulation – printing – fixing. Digital textile printing – technologies, substrates and dyes - process.		
Unit:3		
Textile finishing – introduction – classification – physical, functional, chemical, plasma finishes. Coated fabrics. Antishrink finish – water repellent finish – soil release finish – flame retardant finish - UV protective finish – antimicrobial finish.		
Unit:4		
Introduction to textile testing and quality control. Humidity - Wet and dry bulb Hygrometer, Moisture regain - moisture content - conditioning oven. Fibre tests, Yarn tests, Knitted Fabric - Loop Length - Course/inch, Wales/inch - GSM, Woven fabric - Ends/inch - Picks/inch - cover factor - GSM.		
Unit:5		
Fabric testing - tensile strength, tearing strength, bursting strength, abrasion, pilling, drape, stiffness, crease resistance / crease recovery. Testing of colour fastness - washing, rubbing, perspiration, dry cleaning, bleaching, light.		
Reference Books		
1	Fundamentals and Practices in Colouration of Textiles, J. N. Chakraborty, Woodhead Publishing India, (2015).	
2	Textile Dyeing, N. N. Mahapatra, Woodhead Publishing India, (2018).	
3	Digital Textile Printing, Susan Carden, Bloomsbury Publishing, (2015).	
4	Principles of Textile Finishing, Asim Kumar Roy Choudhury, Elsevier Science, (2017).	
5	A Practical Guide to Textile Testing, Amutha K, Woodhead Publishing India Ltd., (2016).	

PAPER V
PRACTICAL I

Pattern Making & Garment Construction	
Preliminaries	
1	Fabric grain – straight, cross and bias, true bias.
2	Cutting of fabrics, seam allowance, notches.
Preparation of paper pattern and stitching the garment	
1	T-Shirt
2	Polo T-Shirt
3	Raglan sleeve T-Shirt
4	Shorts
5	Track suit & Ladies Top

PAPER VI
PRACTICAL II

Textile Testing	
1	Identification of textile fibres- Microscopic, Burning, Solubility Tests.
2	Determination of yarn count.
3	Identification of Twist in yarn.
4	Identification of Fabric count – Ends per inch (EPI); Picks per inch (PPI).
5	Determination of Fabric Weight – Grams per square meter.
6	Determination of fabric thickness.
7	Determination of fabric stiffness
8	Determination of fabric bursting strength.
9	Determination of fabric tear strength.
10	Determination of crease recovery of fabric.

PAPER VIII
PRACTICAL III

Computer aided Pattern making and Marker planning	
1	Pattern making with CAD.
2	Pattern grading.
3	Marker Planning.
4	Calculation of marker efficiency.
5	Waste reduction by efficient marker planning.