



Syllabus for the Ph.D. Entrance Examination

Department of Fashion and Apparel Design

Fashion Design

UNIT I – GARMENT SAMPLING & APPROVAL PROCESS

Introduction to garment samples, Types of samples, Proto sample, Fit sample, Size-set samples, Pre-production (PP) sample, GPT (Garment Performance Test) sample, Top of Production (TOP) sample, Red-seals & Gold-seals, Purpose of sampling & buyer expectations, Sample development workflow, Miniature / Muslin samples for drape & silhouette study, Bulk production approval process, Rejection handling & corrective action, Standard size selection for men's & women's samples, Size ratios for bulk orders (e.g., 6000 pieces ratio).

UNIT II – TECH PACK DESIGN & DOCUMENTATION

Introduction to Tech Pack, Components of a Tech Pack: Style sheet/fashion flat drawings, Bill of Materials (BOM), Measurement sheet, Graded measurement sheet, Construction sheet, Stitch instructions, Printing & embroidery instructions, Washing instructions, Labeling & packaging instructions, Role of designers, technical designers & merchandisers in preparing tech pack, Tech pack as a legal and master manufacturing document, Using tech pack for cost estimation and sample reduction, Outsourcing & contractor requirements, Pattern development using measurement sheets.

UNIT III – MERCHANDISING & GARMENT COSTING

Introduction to apparel merchandising, Functions of marketing merchandiser, Planning, development, execution and dispatching of orders, Material sourcing & trims (raw materials other than fabric), Costing components: material cost, labour cost, overheads, CMT (Cut-Make-Trim) cost, Techniques and processes of estimating cost, Spec sheet revisions in bulk production.

UNIT IV – GARMENT PRODUCTION PROCESS

Pre-production planning, Fabric inspection, spreading and cutting, Production workflow, Quality checkpoints during stitching, Importance of GPT samples, Using size-set samples for finalizing fits, Bulk production authorization procedure.

UNIT V – SEWING MACHINES, PARTS & OPERATIONS

A. SNLS (Single Needle Lock Stitch) Machine: Stitch formation, Needle-thread interaction, Spool holder and bobbin case function, Bobbin access area & slide plate, Tension device & its functions, Stitch length regulation, Presser foot pressure adjustment, Feed dog mechanism, SPI (Stitches Per Inch) & its application; B. DNLS (Double Needle Lock Stitch) Machine: Use & features, Applications in industry; C. Overlock/Serger Machine: Stitch formation in overlock, Two-thread, three-thread, four-thread overlock uses, Edge trimming mechanism, Seam types & applications.

Recommended Reference Books for Research Methodology

1. Technology of Clothing Manufacture – Harold Carr & Barbara Latham
2. Apparel Manufacturing: Sewn Product Analysis – Ruth E. Glock & Grace I. Kunz