

TEXTILE TECHNOLOGY**GROUP CODE: TX****Max.100****1. TEXTILE FIBRES: -****Marks 12**

Classification of textile fibers, types of yarns, polymerization, natural fibers-cotton, wool, silk, bast fibers, Manmade fibres-Viscose rayon, Acetate rayon, Nylon 6, Nylon 66, Polyester, Acrylic. High performance fibres: carbon, Kevlar, Nomex and glass.

2. YARN MANUFACTURING: -**Marks 14**

Ginning process, opening and cleaning- bale openers, blenders, openers and beaters, scutcher, chute feed system .carding, drawing, combing, roving, Ring frame, Rotor spinning, Air jet spinning, Siro spinning, Twist less spinning. Spinning calculations.

3. FABRIC MANUFACTURING: -**Marks 14**

Preparatory process- Warp and weft winding, warping, sizing, shedding- Tappet, dobby and jacquard., picking, beat up, let off, take up, weft and warp protector mechanisms. Automatic looms, box motions, and shuttle less looms.

4. CHEMICAL PROCESSING OF TEXTILES: -**Marks 14**

Water purification, preparatory process- Singeing, desizing, bleaching, mercerization, degumming, dyeing- theories, acid dyes, basic dyes, direct dyes, reactive dyes, vat dyes, azoic dyes, sulfur dyes, metal complex dyes, disperse dyes and their applications. Printing- Methods, styles, printing paste ingredients and curing. Finishing- Mechanical finishes and chemical finishes. Pollution and pollution control.

5. TEXTILE TESTING: -**Marks 14**

Fiber testing- Sampling, moisture relations, length, fineness, strength, and maturity. Yarn testing- Yarn count, twist, irregularity, hairiness and strength. Fabric testing-Dimensions, strength, fabric handle and drape, air permeability, water, crease recovery, serviceability, and fastness. Statistical quality control-central tendency measures, dispersion measures, probability distributions, significance tests and control charts.

6. FABRIC STRUCTURE AND APPLIED DESIGN: -**Marks 12**

Elements of structure, Simple weaves- plain and its derivatives, twill and its derivatives, satin and sateen. Honey comb, huckaback, mock leno, bed ford cord, pique, distorted thread effects. Compound weaves- extra thread figuring, backed cloths, pile fabrics, leno fabrics, double cloths. Color theory-Light and pigment theories, arrangement of figures, color and weave effects.

7. KNITTING: -

Marks 8

Historical Developments, Weft knitting-Elements, Basic stitches, machines, Structures and their derivatives, patterning. Warp knitting- elements, tricot machine, raschel machine, tricot and raschel structures, Quality control, seamless technology, electronics in knitting, weft knitting calculations.

8. APPAREL MANUFACTURE: -

Marks 12

Fabric sourcing, pattern making, spreading, cutting, sewing, fusing, pressing, packing, merchandising, embroidery, SQC, Industrial engineering, sewing skills and GSD, R & D in Industrial Engineering.