

PFT3I102

Fundamental of Textile – I (3-0)

Module I (16 hours)

Objects of ginning, study of different ginning machines. Basic operations in the blow room section, Objects of Carding. Principles of carding & stripping actions .Study of different parts and function of a Carding Machine. Mechanical and Actual draft, Defects in carding. Objects of Drawing. Study of different parts and function of high speed Draw Frame Machine. Objects of Comber. Preparatory processes and mechanism of combing operation .Objects of Speed frame. Study of different parts and function of a modern speed frame machine. Principles of drafting, twisting and winding in speed frame.

Module-II (12hours)

Objects of Ring spinning, Study of different parts and function. Brief idea about rotor, air jet, friction spinning machines & Properties of those yarns. Study of different types of yarn: (ply, core spun, sewing thread, Slub, and melange yarn). Objects of warp and weft winding. Objective of warping, types of warping (Direct and Sectional types).Objects of sizing, sizing ingredients and their function, path of yarn in a sizing machine.

Module-III (08hours)

Basic concept & working principle of Shedding, Picking, & beat up mechanism. Shuttle checking. Objective & working principle of Take up motion. Basic concepts & working of the let off motion, Basic concepts of Warp protector mechanisms & warp stop motions.

Module-IV (08hours)

Fancy Fabric Formation: Functions of Dobby, Types of Dobby, Function of Jacquard, Drop Box Mechanism, Different types of fabric defects their causes and remedies. Brief idea about Gripper, Rapiers, Air Jet and Water Jet Weaving Machines. Brief idea about plain and twill weave.

Books Recommended:

1. Manual Cotton Spinning-Vol.to 5, Textile Institute
2. A practical Guide to Opening & cleaning, W. Klien
Draw frame, Speed frame & Comber, Ring Spinning (All parts)
3. The Institute of Technology , Szaloski USE series on Textile Processing
4. Recent Advances in Spinning Technology, Salhotra
5. Spun Yarn Technology, Oxtoby
6. An introduction to Warping and Winding- Dr.M.K.Talukdar
7. Industrial Practice in Yarn Winding- NCUTE
8. Sizing : Material,Method & Machine – D.B.Ajgaonkar
9. Weaving Mechanism – N.N.Banerjee
10. Weaving Mechanism – Robinson & Marks
11. Modern Preparation and Weaving machine – A.Ormerod.