

III Semester (CC –IV) - Yarn Manufacture – II

Major Divisions:

1. Ring frame
2. Modern ring frame
3. Doubling, Reeling, bundling and baling
4. Open end spinning
5. Texturisation

Unit – I

Ring frame

Objects of Ring Spinning frame. Detailed study of Ring frame. Selection of top rollers, aprons, cots, spacers and their influence on yarn quality. Study of top arm drafting systems. Principles of Building Motion. Brief study of Different types of Builds.

Unit - II

Modern Ring Frame

Brief study of special attachments such automatic doffing, pneumafil and Balloon control rings. Large package spinning – Advantages and disadvantages. Brief study of twist factor, twist strength and count relationship for coarse, medium and fine counts. Common defects in spun yarn, causes and remedies. Salient features of modern ring frame. Calculations pertaining to production and efficiency.

Unit - III

Doubling, Reeling, Bundling & Baling.

Objects and methods of doubling. Passage of material through dry & wet doubling machines. Different methods of threading in dry doubling. Direction of twist in doubled yarn and its relation to single yarn. Calculation of resultant count. Reeling – objects and types of reeling. Object of bundling and baling. Gassing – Objects methods of gassing. Principles of Two for One twister (TFO). Brief study of fancy yarns.

Unit - IV

Open End Spinning

Rotor Spinning: Introduction – Classification – O.E Spinning – Basic principles and working of the Rotor spinning Machine – Study of the parts of Rotor Spinning –Structure of rotor yarn . Uses of O E yarns.

Unit - V

Texturisation

Need for bulking of synthetic fibres – Texturing basic definition and classification of textured yarns. Basics of various methods of texturing. Properties and uses of textured yarns.

Stuffer box and Edge crimping methods – principles, limitations and applications, Knit- de –knit and Gear crimping methods.

Reference Books:

1. Manual of Cotton spinning volume IV & V – Textile Institute Manchester. LONDON.
2. Cotton spinning – Taggart
3. Cotton ring spinning – G.R. Merrill
4. Cotton waste industry –H.V. Srinivasamoorthy
5. Roller spinning – Eric Dyson
6. Textile Institute, Manchester - Klein Series.