

# GUJARAT TECHNOLOGICAL UNIVERSITY

## B.E. SEMESTER : VIII

### TEXTILE TECHNOLOGY

Subject Name: **PRINCIPLES OF TEXTILE PROCESS**

Sr. No.	Course Contents	Total Hrs
	<b>Spinning</b>	
1.	Evaluation of Blow Room Cleaning efficiency.	03
2.	Analysis of cylinder load and transfer efficiency. Fiber configuration in card and drawn sliver. Fibre straightening and hook removal.	03
3.	Fibre entanglement & hook removal theory, derivation of Drafting Force equation.	03
4.	Evaluation of comber fractionation efficiency.	03
5.	Forces acting on ring traveller & Ballooning Theory, Derivation of Winding Tension and Balloon tension	03
6.	Optimisation of yarn content on ring spun package.	03
7.	End breaks on speed frame & ring frame.	03
8.	Theory of end breaks in Open End spinning.	03
	<b>Weaving</b>	
9.	Theory of unwinding tension of Ring spun package.	02
10.	Control of size pick up % & stretch on sizing machine.	02
11.	Sley Kinematics-Derivation of Equations for Sley velocity, acceleration, force etc;	03
12.	Interrelationship between Shedding and beating.	02
13.	Picking- factors affecting velocity of shuttle, relationship between shuttle velocity, loom speed and WIR Shuttle acceleration during picking, factors leading to uniform acceleration.	04
14.	Retardation and theory of shuttle checking.	03
15.	Design aspects of picking cam.	03
16.	Design of let-off and its limitations.	02
17.	Theory of propulsion in air jet loom, torsion rod mechanics and velocity and acceleration of projectile loom.	03

#### Text Books:

Sr. No.	Title	Author
1.	Principles of weaving	Marks & Robinson
2.	Weaving: Conversion of Yarn to fabric	Lord & Mohammed
3.	Textile Mathematics Vol. III	Booth J. E.

#### Reference Books:

Sr. No.	Title	Author
1.	Weaving : Technology & Operations	Ormerod A.