

GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA IN TEXTILE MANUFACTURING TECHNOLOGY

Semester: 4

Subject Name TEXTILE TESTING

Sr.No	Course content
1.	Introduction of Textile Testing. 1.1 Objective of testing. 1.2 Necessity of testing. 1.3 Standard atmospheric condition for testing. 1.4 Various sampling methods.
2.	Fibre Testing. 2.1 Fibre length measurement by (a) Baer Sorter (b) Uster Stapler (c) Digital Fibrograph 2.2 Fibre strength measurement by Stelometer and Pressley Bundle fibre strength tester. 2.3 Fibre Fineness Tester - including maturity measurement -Shirley Fineness Tester -Gravimetric method to test fibre fineness 2.4 Moisture content/regain by Oven method to assess the excess amount of moisture in the fibre. 2.5 Trash content by Trash Analiser.
3.	Yarn Testing. 3.1 To find out the yarn count by -Ordinary Balances, Knowles Balance -Quadrant Balance, Pocket Balance -Monopan Balance 3.2 Twist measurement by -Manual Twist Tester -Continuous Twist Tester -Definition of Twist, Direction of Twist, Amount of Twist -Relation between Twist and Count -Twist function 3.3 Irregularity of yarn. -Measurement by Fielden Walker and Uster Evenness Tester -Brief study of Instron for irregularity and strength 3.4 Tensile strength of Yarn by Inclined Plane, Pendulum principle, Ballistic strength tester.(single yarn tester & Lea Tester) -Tenacity of filament -Crimp rigidity

4.	Fabric Testing. 4.1 Fabric Particulars. -Tensile strength - Pendulum lever principle (Fabric strength tester) -Bursting strength -Comparison of bursting strength with tensile strength -Drape, Handle, Stiffness, Crease recovery -Abrasion Resistance (Flex, Flat and Edge resistance) -Porosity and Permeability -Pilling Test -Thermal Conductivity -Tearing Test -Thickness Tester -Water repelancy
5.	High volume inspection

LABORATORY EXPERIENCES :

SR.NO.	NAME OF TOPIC/EXERCISE
1	Fiber length Measurement a) Barer sorter b) Uster Stapler c) Fibrograph
2	Fiber strength measurements a) Stelometer b) Presslley bundle strength tester
3	Fiber fineness testing a) Air flow method
4	Yarn count Measurement
5	Yarn Twist Measurement
6	Yarn evenness Testing
7	Yarn Lea strength testing
8	Fabric Strength testing
9	Tearing Test of Fabric.
10	High Volume Instrument