

		<u>Lesson Plan</u>
		Name of Faculty : Atul Kumar
		Discipline: Textile Technology
		Textile Technology Semester: 4th
		Subject: Textile Testing-1
		Lesson Plan Duration: 15 weeks (Jan 2025 – May 2025)
		Work Load (Lecture per week (in hours): Th = 3 per week
Week	Lecture	Introduction to textile testing (aim and Scope). Importance and objectives of textile testing.
1	1	Sampling techniques. Random and biased samples
	2	Zoning techniques for raw cotton. Yarn sampling methods.
	3	Mean length, staple length, effective length,
2	1	Span length, 2.5% span length, 50% span length, short fiber percentage
	2	Analysis of Baer sorter diagram.
	3	Definition of fibre fineness. Importance of fibre fineness. Principle of air flow machines for measurement of fineness.
3	1	Fiber strength, fibre maturity, maturity percentage and maturity ratio.
	2	Definition of moisture content and moisture regain of textiles.
	3	Relative and absolute humidity. Standard Atmospheric conditions
4	1	Wet and dry bulb hygrometer. Humidity and its importance to textile material.
	2	Estimation of foreign matter. Trash percent in cotton.
	3	1st sessional Exam
5	1	HVI instrument, principle, uses and advantages.
	2	AFIS yarn analysis. Bundle Fiber strength tester.
	3	Maturity of cotton fibre by Caustic Soda Method,
6	1	Differential Dyeing Method and Polarised Light Method.
	2	Measurement of moisture regain by Oven dry method.
	3	Trash analysis in cotton by Shirley trash analyser.
7	1	Twist and its importance.
	2	Twist effects on yarn properties.
	3	Twist factor, single and ply yarn.
8	1	Twist Testers.
	2	Twist by direct count method
	3	2nd sessional exam
9	1	Single yarn twist tester.
	2	Ply yarn twist tester, twist untwist method.
	3	Yarn numbering systems
10	1	Direct, Indirect and Universal systems of yarn numbering.

	2	Conversion factors for various numbering systems in detail.
	3	Determination of count of yarn by simple weighing method and from small length by Bessley's yarn balance.
11	1	Yarn strength- Single yarn
	2	lea strength tester.
	3	Elongation- Breaking elongation. Elongation at break.
12	1	Count strength product
	2	CRE, CRL, CRT type.
	3	Factor affecting the tensile property of yarn.
13	1	Principle of tensile testing machine
	2	Tensile strength Testing of Yarn.
	3	3rd sessional
14	1	Single and lea strength tester.
	2	Evenness of yarn.
	3	Principle, working and advantage and disadvantage of uster evenness tester.
15	1	Classification of Yarn Faults and Its Removal.
	2	Classmate yarn fault analysis.
	3	Query class