

LESSON PLAN		
Sem./ Branch: 5 th Sem./ Text. Tech.		Duration: 15 Weeks
Subject: Testing and Quality Control-I		Name of Faculty: Ajay Bishnoi
Week	Theory Topics (3 Periods/ Week)	Practical (3 Periods/ Week)
1 st	Introduction to textile testing (Aim and Scope) Sampling techniques, Random and biased samples. Techniques for sampling of fibres. Squaring and cut squaring techniques. Zoning techniques for raw cotton.	
2 nd	Fibre length measurement by Analysis of Sorter diagram, Shirley Photoelectric Stapler, Digital.	
3 rd	Fibrograph, principle and working of these machines	Fibre length by Digital Fibrograph
4 th	Fibre maturity, primary and secondary wall and lumen in cotton. To find out maturity of cotton fibre by Caustic Soda Method	To find out maturity of cotton fibre by Caustic Soda Method,
5 th	Differential Dyeing Method and Polarised Light Method. Definition of maturity percentage and maturity ratio.	
6 th	1st Sessional test	
7 th	Definition of fibre fineness. Importance of fibre fineness. Principle of air flow machines for measurement of fineness.	To find out fibre fineness by air flow instruments. Sheffield Micronaire
8 th	To find out fibre fineness by Vibroscope, Arealometer and micronaire. Sheffield Micronaire	
9 th	Humidity and its importance to textile material .Moisture Content and Moisture Regain of textiles. Relative and Absolute Humidity. Measurement of moisture regain by Oven Drying and Electronic Moisture Meter under Standard Atmosphere conditions.	To find relative humidity by dry and wet bulb thermometers and Whirling Hygrometer. To find out moisture content of textiles by Oven Drying and Electronic Moisture Meter
10 th	Wet and dry bulb hygrometer. Estimation of foreign matter Trash percent in cotton. Cleaning efficiency of machine. Trash analysis in cotton by Shirley analyser. Estimation of blow room and card machines efficiency by Shirley analyser	To find out trash content of cotton by trash analyser
11 th	2nd Sessional test	
12 th	Yarn numbering systems. Direct, Indirect and Universal systems of yarn numbering. Conversion factors for various numbering systems. Determination of count of yarn by simple weighing method and from small length by Bessley's yarn balance (hank and silver also)	To find out count of yarn by simple weighing method Determination of count of yarn with the help of wrap reel, Beeslay balance , quadrant balance
13 th	Twist and its importance. Its effects on yarn properties. Twist factor, single and ply yarn-Twist Testers.Factor affecting the tensile property of textile - Theory of Yarn, principle of tensile testing machine.	Determination of yarn twist (Single and Ply yarns) by twist testers

14 th	Tensile strength Testing of Yarn. Single and lea strength tester, count strength product. Importance of statistic in testing .average and other method of location; mean, median, mode	Method of determining yarn strength with the help of single yarn strength tester and Lea strength tester
15 th	3rd Sessional test	
16 th	Coefficient of variation, standard deviation. Reporting systems like ERP and SAP should be included in IT section curriculum.	