Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V • EXAMINATION – SUMMER • 2014

Subject Code: 152804 **Date: 17-06-2014**

Subject Name: Chemical and Physical Analysis of Textiles

Time: 10.30 am - 01.00 pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	State the methods employed for moisture removal from fibres. Discuss any two methods in detail.	**07**
	(b)	With the help of neat sketch, explain the instrument used for measuring of length of yarn available in package form for calculating the yarn count.	**07**
Q.2	**(a)**	Write a brief note on "Determination of size content used in textiles".	**07**
	(b)	Discuss how the fibre identification can be done using different chemical reagents.	**07**
		OR	
	(b)	Discuss how the microscopic methods are used for analysis of fibre identification.	**07**
Q.3	**(a)**	Give the different methods by which the twist in the yarn can be measured. Briefly describe the rock bank twist tester.	**07**
	(b)	A lea (120yds) of cotton yarn weighs 40 grains. Find out whether the yarn is coarser or finer.	**07**
		OR	
Q.3	**(a)**	With the help of neat sketch, explain briefly the Wet & Dry Bulb hygrometer.	**07**
	(b)	Write a brief note on "Measurement of Maturity of cotton fibres".	**07**
Q.4	**(a)**	Give the significance of measuring tearing strength of fabric. With the help of neat sketch, explain briefly the Tearing strength Tester.	**07**
	(b)	Which are the properties of fabric which determine the fabric handle. Name the instruments used to assess them and describe any one instrument in detail.	**07**
		OR	
Q.4	**(a)**	With the help of neat sketch, explain the principle, construction & working of Fibre trash analyser.	**07**
	(b)	Define the following terms: i. Breaking Load & Tenacity ii. Stress & Strain	**07**
Q.5	**(a)**	Discuss the different methods used for determination of the blend content of textiles.	**07**
	(b)	Give the significance of measuring the blend content in textiles and also discuss the different factors affecting the accuracy of quantitative analysis of them.	**07**
		OR	
Q.5	**(a)**	With the help of neat sketches, explain the different methods used to find the melting point of textile fibres	**07**
	(b)	What is the desiccant? Explain its working in detail.	**07**

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