Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE – SEMESTER V • EXAMINATION – WINTER - 2012

Subject code: 152804 **Date: 16-01-2013**

Subject Name: Chemical and Physical Analysis of Textiles

Time: 02:30 pm to 05:00 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)**	With the help of neat sketch, explain briefly the hydraulic bursting strength tester.	**07**
	(b)	Explain briefly the Fabric thickness Guage.	**07**
Q.2	**(a)**	What is saponification No.? Explain determination of saponification No.	**07**
	(b)	Discuss the methods of determining the size content in textile fabrics. Also discuss the size material which is used for yarn sizing.	**07**
		OR	
	(b)	Discuss the effect of different chemical reagent on cotton and polyester fibres.	**07**
Q.3	**(a)**	With the help of neat sketch, explain the principle, construction & working of Pressley bundle fibre strength tester.	**07**
	(b)	With the help of neat sketch, explain briefly the Tearing strength Tester.	**07**
		OR	
Q.3	**(a)**	With the help of neat sketch, explain briefly the Drapemeter.	**07**
	(b)	Write a brief note on “Measurement of Threads per inch in woven fabric”.	**07**
Q.4	**(a)**	With the help of neat sketch, explain any one instrument used to measure twist in yarn.	**07**
	(b)	Explain how, yarn unevenness is assessed by visual examination.	**07**
		OR	
Q.4	**(a)**	Explain briefly the Wet & Dry Bulb hygrometer.	**07**
Q.4	**(b)**	What do you mean by moisture content & moisture regain. Give the relation between both of them. Explain any one method of measuring moisture in textile material.	**07**
Q.5	**(a)**	Discuss the different methods used to find the melting point of textile fibres	**07**
	(b)	Explain in detail, how determination of the formaldehyde in fabric treated with cross linking agent, is done.	**07**
		OR	
Q.5	**(a)**	Explain how, quantitative analysis of blends is done. Also describe any one method used for quantitative determination of the blend content of textiles.	**07**
	(b)	State the methods employed for moisture removal from fibres. Discuss any two methods in detail.	**07**

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