Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- Vth SEMESTER–EXAMINATION – MAY/JUNE - 2012

Subject code: 152603 **Date: 04/06/2012**

Subject Name: Textile & Metal Reinforcement of Elastomers

Time: 02:30 pm – 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)**	**Answer the following.**	**06**
	1.	Give the difference between Natural Silk & Artificial Silk.	
	2.	List the first four finishing operations carried out after spinning of the fibre.	
	3.	Define the term: (i) Denier (ii) Crimp	
	(b)	**Answer the following.**	**08**
	1.	Short Note on Nitrocellulose Rayon.	
	2.	List any five possible causes & its remedy for failure at the Rubber cement interface.	
Q.2	**(a)**	Write about the classification of Fibres.	**07**
	(b)	Discuss the Non-Standard methods of assessing results of Peel Test	**07**
		OR	
	(b)	Describe in detail about Peel tests involving Light weight coatings of fabrics.	**07**
Q.3	**(a)**	Discuss in detail about Ebonite Bonding.	**07**
	(b)	Discuss in detail about the selection of materials for good adhesion between Rubbers to Metal.	**07**
		OR	
Q.3	**(a)**	Short note on “Self- bonding compounds”.	**07**
	(b)	Discuss in detail about Environmental factors affecting Adhesion	**07**
Q.4	**(a)**	Short note on Chemically bonded Non-Woven fabrics.	**07**
	(b)	Define the term: “fibre” & List the important requirements of fibre.	**07**
		OR	
Q.4	**(a)**	Write in detail about properties of Synthetic Fibres	**07**
	(b)	List the Technical Limitations & Barriers for Short Kevlar Aramid Fibres.	**07**
Q.5	**(a)**	Why Short fibre filled compounds should be used? Explain in detail.	**07**
	(b)	List the different methods of Spinning. Write any two in detail	**07**
		OR	
Q.5	**(a)**	List the applications of Santoweb fibre in commercial Products.	**07**
	(b)	List the different stages for the production of Cotton. Write any two in detail.	**07**

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