

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**
