

GUJARAT TECHNOLOGICAL UNIVERSITY**BE – SEMESTER V • EXAMINATION – WINTER - 2012****Subject code: 152603****Date: 17-01-2013****Subject Name: Textile & Metal Reinforcement of Elastomers****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 Answer the following

- (a) List the important requirement of a Fibre. (04)
- (b) Write the different steps for preparation of Artificial Fibres. (03)
- (c) Explain in detail about different methods of Spinning. (07)

Q.2 (a) Answer the following

- (i) What are the Industrial Textiles? Write its application & its key requirements for Sports & Leisure field. (05)
- (ii) List the different types of Coating methods for Industrial Textiles. (02)
- (b) Write the applications & properties of Aramid fibre. (07)

OR

- (b) Discuss the manufacturing process of Rayon by Viscose method. (07)

- Q.3 (a) Write about Elastomeric Fibres. (03)
- (b) Describe about the Bonding through Chemical Forces. (05)
- (c) Give the Classification of Textile Fibres. (06)

OR

- Q.3 (a) Write about the basic categories & their sub categories of bond failure. (05)
- (b) Short note on Fibre Morphology. (09)

- Q.4 (a) List the different methods used for the production of Non-Woven fabrics. Write about any two in detail. (07)
- (b) Discuss about the Compounding of Short Fibre materials. (07)

OR

- Q.4 (a) Write about Fabric Designation System. (07)
- (b) List the Technical advantages, limitation & barriers for Kevlar Aramid Short Fibres. (07)

- Q.5 (a) Discuss in detail about the effects of rubber compounding ingredients on adhesion. (07)
- (b) Explain the standard test procedure for Peel strength. (07)

OR

- Q.5 (a) Short note on “Environmental Factors Affecting Adhesion.” (07)
- (b) Explain about the Peel Test involving Light Weight Coatings on Fabrics. (07)
