

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- VIth SEMESTER-EXAMINATION – MAY- 2012****Subject code: 162904****Date: 17/05/2012****Subject Name: Technical Textiles - I****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) Define technical textiles and discuss briefly the various applications of technical textiles. **07**
(b) Write on the various natural, man-made and specialty fibres used in the production of technical textiles. **07**
- Q.2** (a) Explain stages of manufacturing involved in production of non-woven fabric. **07**
(b) Discuss the factors considered for selection of fabric for filtration application. **07**
OR
(b) Draw the technical textile material, processes and product chart. **07**
- Q.3** (a) Explain the concept of cross laying and compare the properties of parallel laid and cross laid batt. **07**
(b) Write a short note on chemical bonding in non-woven manufacturing process. **07**
OR
- Q.3** (a) Explain the principle and working of cards used in manufacturing of non-woven fabric. **07**
(b) Write on needle felting technique. **07**
- Q.4** (a) Write on the fabric constructions found in filter fabrics. **07**
(b) Write on the material used for coating the fabric and explain the knife coating technique. **07**
OR
- Q.4** (a) Discuss the various finishing treatments given to filter fabrics. **07**
(b) Explain the following coating techniques: Transfer coating and Calendering. **07**
- Q.5** (a) Explain the function and property requirements of tyre cord. **07**
(b) Write in short on geotech, protech and oekotech. **07**
OR
- Q.5** (a) Explain the manufacturing process of nylon 6 tyre cord. **07**
(b) Write in short on medtech, indutech and mobiltech. **07**
