

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI • EXAMINATION – WINTER 2013****Subject Code: 162904****Date: 06-12-2013****Subject Name: Technical Textiles-I****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) Discuss briefly the essential requirements of a good filter fabric. **07**
(b) Define nonwoven fabric. Explain the method of production of melt blown nonwoven fabric with the help of neat diagram. **07**

- Q.2** (a) What are Agrotextiles ? State the advantages of using Agrotextiles. **07**
(b) What are Geo textiles? State the major functions of Geotextiles and list out various applications of geotextiles. **07**

OR

- (b) Compare properties of Woven, Nonwoven and knitted filter fabrics briefly. **07**

- Q.3** (a) Compare wet laid web with dry laid web. With the help of neat diagram, explain random laid web formation process in detail. **07**
(b) Compare stitch bonding process with needle punching process. With the help of neat diagram, explain needle punching process in detail. **07**

OR

- Q.3** (a) State the advantages and disadvantages of adhesive bonding process as compared to other bonding process. Also explain the adhesive bonding process in detail with the help of neat diagram. **07**
(b) With the help of neat diagrams, explain the principles of working of thermal and print bonding process in detail. **07**

- Q.4** (a) Discuss the application of PVC as a coating material. **07**
(b) With the help of neat sketch, explain the hot melt coating in detail. **07**

OR

- Q.4** (a) Discuss the application of rubber as a coating material. **07**
(b) With the help of neat sketches, describe Knife coating in detail. **07**

- Q.5** (a) Discuss briefly about Medical Textiles and its various application. **07**
(b) Discuss briefly about : **07**
i. Glass fiber ii. Aramid Fiber

OR

- Q.5** (a) State the advantages of foam bonding over other process. Explain the foam bonding process in detail with the help of neat diagram. **07**
(b) Discuss briefly about : **07**
i. Carbon Fiber ii. Metal Fiber
