

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VI (NEW) EXAMINATION – WINTER 2018****Subject Code:2162904****Date:20/11/2018****Subject Name:Technical Textile-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) Define the term technical textiles. List their different segment. **03**  
(b) Give the classification of nonwovens. **04**  
(c) Explain the principle of needle punching with a neat sketch. **07**
- Q.2** (a) State various applications of agrotech. **03**  
(b) Explain how the dry laid webs are manufactured with a neat sketch. **04**  
(c) Compare and contrast the process of coating and laminating processes. **07**
- OR**
- (c) Write in short on various types of glass fiber and their applications. **07**
- Q.3** (a) How do technical textiles differ from conventional textiles? **03**  
(b) Provide different application areas of technical textile in automobile and civil engineering. Describe use of synthetic fibres in technical textile. **04**  
(c) Discuss the applications of knitted technical fabrics in detail. **07**
- OR**
- Q.3** (a) Define nonwoven fabrics. **03**  
(b) Discuss about SMS fabric **04**  
(c) Explain the manufacturing of melt blown web with a neat sketch. **07**
- Q.4** (a) What are advantages of Calendering process? **03**  
(b) Discuss about antimicrobial finish. **04**  
(c) Write a brief note on “Wet Processing of Technical Textiles” **07**
- OR**
- Q.4** (a) Write on the essentials of Heat setting finishing. **03**  
(b) Discuss the factors affecting the effectiveness of coating material in a given fabric. **04**  
(c) Explain how dry powder coating is done to obtain coated Fabrics with a neat sketch. **07**
- Q.5** (a) State various applications of nonwoven medical textiles. **03**  
(b) State the advantages of nonwoven fabrics. **04**  
(c) Write a brief note on “Stitch Bonded Nonwovens”. **07**
- OR**
- Q.5** (a) State the advantages of Coating. **03**  
(b) Discuss about coating materials **04**  
(c) Write a brief note on “Textile Reinforced Composites”. **07**

\*\*\*\*\*