

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-VIII EXAMINATION – WINTER 2015**

**Subject Code:182903****Date:07/12/2015****Subject Name: Technical Textiles -II****Time: 2:30pm to 5:00pm****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) Give the classification of Geosynthetics. **04**  
(b) Discuss the primary functions of Geotextiles. **10**
- Q.2** (a) Discuss application areas and pre-requisites of Automotive textiles. **08**  
(b) “Enormous weight benefits thanks to textiles in Automobile”. Justify. **06**
- OR**
- (b) Discuss in brief about textile articles being used in Aircrafts. **06**
- Q.3** (a) Enlist the properties which can be imparted to textiles using nanotechnology. Explain Lotus effect in detail. **07**  
(b) Nanotechnology holds an enormously promising future for textiles. Justify. **07**
- OR**
- Q.3** (a) Explain the concept of tissue engineering in detail. **07**  
(b) With the help of neat diagrams, explain some of the applications of teflon fibres in medical textiles. **07**
- Q.4** (a) State and explain different types of extra-corporeal materials with the help of neat diagrams, wherever required. **07**  
(b) Define smart textiles. With the help of neat diagrams, explain any two applications of smart textiles. **07**
- OR**
- Q.4** (a) With the help of neat diagrams, explain cath lab blanket, cardiac blanket and pediatric blanket in detail. **07**  
(b) State some of the applications of industrial fabrics. With the help of neat diagrams, explain some of the applications of the same in electrical fields. **07**
- Q.5** (a) Define healthcare textiles. With the help of neat diagrams, explain some of the important products of this area of textiles. **07**  
(b) Compare conveyer with power transmission belt. With the help of neat diagrams, explain different structures of belts. **07**
- Q.5** (a) State the composition of glass reinforced plastics. Explain the method of production of small, narrow boat using glass fabric. Also, highlight some of the important properties of glass reinforced plastics. **07**  
(b) State some of the applications of protective textiles. Explain in detail characteristics, raw materials and production technology of bullet proof jackets. **07**

\*\*\*\*\*