

GUJARAT TECHNOLOGICAL UNIVERSITY**BE – SEMESTER – VIII. EXAMINATION – WINTER 2016****Subject Code: 182903****Date: 21/10/2016****Subject Name: Technical Textiles II****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) What are extra corporeal materials? Explain, in detail, some of the important extra corporeal materials, with the help of neat diagrams, wherever necessary. **07**
- (b) Compare conveyor belts with power transmission belts. With the help of neat diagrams, explain atleast 3 types of power transmission belts in detail. **07**
- Q.2** (a) State some of the important properties of glass reinforced plastics. Also, explain some of the important applications of glass reinforced plastics. **07**
- (b) With the help of neat diagrams, explain any 3 varieties of special purpose conveyor belts in detail. **07**
- OR**
- (b) Explain different types of blankets used for operating room, recovery room and intensive care unit with the help of neat diagrams. **07**
- Q.3** (a) State the characteristics of protective textiles. Also, explain some of the important properties and applications of flame retardant apparel. **07**
- (b) What are shoe liners? Explain different types and structures of industrial fabrics used for the same with the help of neat diagrams. **07**
- OR**
- Q.3** (a) Give classification of medical textiles on the basis of fibres used in their production. State and explain the applications of polypropylene fibres in medical textiles. **07**
- (b) Define non-implantable materials. With the help of neat diagrams, wherever necessary, explain some of the important types of non-implantable materials. **07**
- Q.4** (a) What are geosynthetics ? Explain, in detail, different types and applications of geosynthetics. **07**
- (b) State the requirements of textiles to be used in automobiles and hence explain some of the important applications of textiles in cars and other road vehicles. **07**
- OR**
- Q.4** (a) State some of the features of smart textiles. Explain some of the smart textiles used in the field of medical textiles with the help of neat diagrams. **07**
- (b) Define self-cleaning fabrics and hence explain some of the important areas of their applications. **07**
- Q.5** (a) State the requirements of fabrics to be used as air-bag and hence discuss about the most preferred fibre to be used for the manufacturing of the same with the help of proper reasoning. **07**
- (b) Define geotextiles and hence explain the criteria for selection of fibres and fabrics for different geotextiles applications. **07**
- OR**
- Q.5** (a) Discuss in detail about the type and structures of fabrics used for electrical cables with the help of neat diagrams. **07**
- (b) Explain the role and importance of nano fibres for imparting different properties to textile materials for different applications of technical textiles. **07**
