

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-VIII • EXAMINATION – WINTER • 2014**

**Subject Code: 182903****Date: 02-12-2014****Subject Name: Technical Textiles II****Time: 02:30 pm - 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) Classify medical textiles on the basis of fibres used in their production. State and explain the applications of some of the important fibres in medical textiles. **07**
- (b) State and explain some of the non-implantable materials, in detail, with the help of neat diagrams, wherever necessary. **07**
- Q.2** (a) Compare carbon reinforced plastics with glass reinforced plastics. Also, explain some of the important applications of carbon reinforced plastics. **07**
- (b) Give classification of belts. With the help of neat diagrams, explain any 3 varieties of conveyor belts in detail. **07**
- OR**
- (b) With the help of neat diagrams, explain different types of blankets used for cardiologists and cardiac surgeons. **07**
- Q.3** (a) What are protective textiles ? State and explain characteristics, properties and applications of fire proof fabrics. **07**
- (b) Explain different types of industrial fabrics used for electrical cables with the help of neat diagrams. **07**
- OR**
- Q.3** (a) What are implantable materials ? Explain, in detail, some of the important implantable materials, with the help of neat diagrams, wherever necessary. **07**
- (b) State the object of power transmission belts. With the help of neat diagrams, explain atleast 3 types of said belts in detail. **07**
- Q.4** (a) State and explain the criteria for selection of fibres and fabrics for different geotextiles applications. **07**
- (b) State and explain some of the important applications of textiles in cars and other road vehicles. **07**
- OR**
- Q.4** (a) Explain the role and importance of nano fibres in different applications of technical textiles with the help of suitable examples. **07**
- (b) What do you mean by self-cleaning fabrics. Explain the same in detail with the help of suitable examples. **07**
- Q.5** (a) Discuss in detail about the applications of textiles in aircrafts. **07**
- (b) State and explain different types and applications of geosynthetics. **07**
- OR**
- Q.5** (a) State the most preferred fibre used for the manufacturing of air-bag and justify the same, in detail, with the help of proper reasoning. **07**
- (b) What are smart textiles ? With the help of neat diagrams, explain some of the smart textiles used in the field of medical textiles. **07**