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 07 extra corporeal materials, with the help of neat diagrams, wherever necessary.
 - (b) Compare conveyor belts with power transmission belts. With the help of neat diagrams, explain atleast 3 types of power transmission belts in detail.
- Q.2 (a) State some of the important properties of glass reinforced plastics. Also, explain 07 some of the important applications of glass reinforced plastics.
 - (b) With the help of neat diagrams, explain any 3 varieties of special purpose 07 conveyor belts in detail.

OR

- (b) Explain different types of blankets used for operating room, recovery room and 07 intensive care unit with the help of neat diagrams.
- Q.3 (a) State the characteristics of protective textiles. Also, explain some of the 07 important properties and applications of flame retardant apparel.
 - (b) What are shoe liners? Explain different types and structures of industrial fabrics 07 used for the same with the help of neat diagrams.

OR

- Q.3 (a) Give classification of medical textiles on the basis of fibres used in their 07 production. State and explain the applications of polypropylene fibres in medical textiles.
 - (b) Define non-implantable materials. With the help of neat diagrams, wherever 07 necessary, explain some of the important types of non-implantable materials.
- Q.4 (a) What are geosynthetics ? Explain, in detail, different types and applications of 07 geosynthetics.
 - (b) State the requirements of textiles to be used in automobiles and hence explain 07 some of the important applications of textiles in cars and other road vehicles.

OR

- Q.4 (a) State some of the features of smart textiles. Explain some of the smart textiles 07 used in the field of medical textiles with the help of neat diagrams.
 - (b) Define self-cleaning fabrics and hence explain some of the important areas of **07** their applications.
- Q.5 (a) State the requirements of fabrics to be used as air-bag and hence discuss about 07 the most preferred fibre to be used for the manufacturing of the same with the help of proper reasoning.
 - (b) Define geotextiles and hence explain the criteria for selection of fibres and 07 fabrics for different geotextiles applications.

OR

- Q.5 (a) Discuss in detail about the type and structures of fabrics used for electrical 07 cables with the help of neat diagrams.
 - (b) Explain the role and importance of nano fibres for imparting different properties 07 to textile materials for different applications of technical textiles.
