

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VIII EXAMINATION – SUMMER 2016****Subject Code:182903****Date:12/05/2016****Subject Name:Technical Textiles II****Time:10:30 AM to 01:00 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) Give classification of medical textiles. With the help of neat diagrams, explain different types of bandages in detail. **07**
- (b) Discuss the application of geotextiles as reinforcement in soil. **07**
- Q.2** (a) With the help of neat diagrams, explain operating room blanket, recovery room and intensive care unit blanket and sterile cardiac access blanket in detail. **07**
- (b) With the help of neat diagrams, explain different types of industrial fabrics used as shoe liners. **07**
- OR**
- (b) Passengers register an airline's identity within the cabin environment through the stimuli of a number of factors in which textiles have the greatest part to play. Justify. **07**
- Q.3** (a) Explain, in detail, different materials used as sutures, orthopedic implants and cardiovascular implants. **07**
- (b) State and explain applications of phase change materials in wound dressings and self adherent dressing. **07**
- OR**
- Q.3** (a) With the help of neat diagrams, explain some of the applications of copper treated soft fibres in medical textiles. **07**
- (b) Classify belts. State and explain some of the important materials used for belts alongwith their properties. With the help of neat diagrams, explain grade SAR and grade FR belts. **07**
- Q.4** (a) State the requirements of fabrics used for flame, heat and flash protection. Explain, in detail, about flame retardant apparels, their characteristics, raw materials and technology used for the production of the same. **07**
- (b) State different applications of carbon fibres and their composites. State some of the characteristics of carbon fabric. Also, define and discuss some of the important properties of carbon reinforced plastics. **07**
- OR**
- Q.4** (a) Define the terms: i. Geosynthetics ii. Separation function of geotextile **06**
- (b) Discuss about general types of Woven Geotextiles. **08**
- Q.5** (a) Textiles can also help to increase passive safety inside cars. Justify. **07**
- (b) The interest in using nanotechnologies in the textile industry is increasing. Give reason. **07**
- OR**
- Q.5** (a) Discuss in brief fabrication of nanofibres. **07**
- (b) What is tissue engineering? Discuss advances in tissue engineering technology. **07**
