Seat No.: _____ Enrolment No._____

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**

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