Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER– VI • EXAMINATION – SUMMER 2015

Subject Code:162904 **Date:14/05/2015**

Subject Name: Technical Textiles-I

Time:10.30AM-01.00PM **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)**	What is nonwoven fabric ? With the help of neat diagram, explain random laid dry web formation method in detail.	**07**
	(b)	With the help of neat diagram, explain the process line used for the production of spray bonded fabric in detail. Also, state the parameters controlling the properties of spray bonded fabric.	**07**
Q.2	**(a)**	Compare needle punch web formation with stitch bond web formation method. With the help of neat diagram, explain needle punch web formation method in detail.	**07**
	(b)	Define medical textiles. State and explain some of the areas of applications of medical textiles.	**07**
		OR	
	(b)	Compare spunbond with melt blown fabric. With the help of neat diagram, explain the method of production of spunbond fabric in detail.	**07**
Q.3	**(a)**	State some of the advantages of spunlace fabric over other types of nonwoven fabrics. With the help of neat diagram, explain the method of production of spunlace fabric.	**07**
	(b)	Give classification of fabric bonding techniques. With the help of neat diagram, explain foam bonding technique in detail.	**07**
		OR	
Q.3	**(a)**	Write short notes on : 1. Metal fibres 2. Kynol fibres	**07**
	(b)	Explain the method of production of carbon fibres. Also, state some of their important properties.	**07**
Q.4	**(a)**	State the requirements for textiles used for automotive applications and hence explain some of the most important areas of applications of automotive textiles.	**07**
	(b)	What are filter fabrics ? Explain some of the important properties of filter fabrics in detail.	**07**
		OR	
Q.4	**(a)**	Explain the method of production of yarns used as tyre cords. Also, state some of the important properties of said yarns.	**07**
	(b)	State some of the advantages of aramid fibres and hence explain their method of production in detail.	**07**
Q.5	**(a)**	Explain briefly, the methods incorporated for drying the coated textile substrate.	**07**
	(b)	Discuss the application & advantages of using chlorinated compounds as coating material.	**07**
		OR	
Q.5	**(a)**	Write a brief note on “Transfer Coating”.	**07**
	(b)	With the help of neat sketch, explain the process of coating with the help of gravure roller.	**07**

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