

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V (NEW) EXAMINATION – SUMMER 2019****Subject Code: 2152603****Date: 20/06/2019****Subject Name: Textile & Metal Reinforcement of Elastomers****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.

		MARKS
Q.1	(a) List out the technical advantages and limitations of Kevlar Aramid fiber.	03
	(b) Give the classification of fibers.	04
	(c) Explain the manufacturing process of Rayon fiber in detail.	07
Q.2	(a) Write the chemical properties of cotton fiber.	03
	(b) What do you mean by Composites? List the application of rubber textile composite products with their advantages.	04
	(c) Explain the manufacturing process of Polyester in detail.	07
OR		
	(c) Short note on “Weaving”.	07
Q.3	(a) “Fiber will increase the reinforcement” justify the statement.	03
	(b) Write a brief note on weft knitting.	04
	(c) Discuss the application and properties of rubber fiber composite.	07
OR		
Q.3	(a) Give the importance of the knitting process.	03
	(b) Write in brief about the melt bonding process.	04
	(c) Discuss the different fabric construction pattern in detail.	07
Q.4	(a) Explain the term: “Coating”	03
	(b) Draw the geometry of peeling test and write the expression of kaelble.	04
	(c) Explain the stenter fabric treatment unit in detail.	07
OR		
Q.4	(a) Draw the diagram of Spreading process.	03
	(b) Write in brief about T-peel test.	04
	(c) Discuss the adhesive treatment for rayon fabric.	07
Q.5	(a) Give the limitations of adhesive bonding.	03
	(b) List out the chemical factors influencing adhesive action. Explain any one in detail.	04
	(c) Short note on “Special Bonding agents”.	07
OR		
Q.5	(a) List out the points for development of adhesive strength.	03
	(b) Write about the metal preparation of metal in brief.	04
	(c) Explain the “Isocyanate bonding” system in detail.	07
