

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-V (NEW) EXAMINATION – SUMMER 2019****Subject Code: 2152907****Date: 19/06/2019****Subject Name: Man Made Fibre Technology****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
<b>Q.1</b>	(a) Describe important properties of man made fibres which has made it very popular.	<b>03</b>
	(b) Discuss in brief about thermal transition.	<b>04</b>
	(c) With a neat sketch describe process of air jet texturing.	<b>07</b>
<b>Q.2</b>	(a) Explain crystallinity and orientation in manmade fibres.	<b>03</b>
	(b) Discuss briefly about fibres with noncircular cross section and hollow fibres.	<b>04</b>
	(c) With a neat sketch describe turbo stapler.	<b>07</b>
<b>OR</b>		
	(c) Describe super micro filaments and its production technique.	<b>07</b>
<b>Q.3</b>	(a) Mention different routes through which polyester can be made flame retardant.	<b>03</b>
	(b) Discuss briefly about fibres with microvoids and microcraters.	<b>04</b>
	(c) List out various methods of spin finish and describe any two methods briefly with neat sketch.	<b>07</b>
<b>OR</b>		
<b>Q.3</b>	(a) Describe method to produce antistatic nylon.	<b>03</b>
	(b) Describe role of spin finish and its composition.	<b>04</b>
	(c) What is heat setting and why it is carried out ? Hence describe temporary sett. Also state its limitation.	<b>07</b>
<b>Q.4</b>	(a) State the types of aramid fibres. Hence state their applications.	<b>03</b>
	(b) Write a short note on metal fibres.	<b>04</b>
	(c) Describe briefly manufacturing process of tyre cords.	<b>07</b>
<b>OR</b>		
<b>Q.4</b>	(a) Describe applications of kynol fibres.	<b>03</b>
	(b) Write a short note on carbon fibres.	<b>04</b>
	(c) State different varieties of glass fibres . Discuss important properties and applications of glass fibres.	<b>07</b>
<b>Q.5</b>	(a) State the objects of texturing.	<b>03</b>
	(b) Describe gear crimping briefly.	<b>04</b>
	(c) Describe false twist texturing process with neat sketch.	<b>07</b>
<b>OR</b>		
<b>Q.5</b>	(a) Describe briefly defects in false twist textured yarn.	<b>03</b>
	(b) Describe important process variables in false twist texturing.	<b>04</b>
	(c) With a neat sketch describe stuffer box texturing.	<b>07</b>

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