GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V (NEW) - EXAMINATION - SUMMER 2017

Subject Code: 2152907 Date: 10/05/2017

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
Q.1		Short Questions	14
	1	What is polymer?	
	2	Give application areas of metallic fibers.	
	3	Define the term Glass transition temperature.	
	4	Give Yang's Classification of manufactured fibres.	
	5	Name three main components of spin finish.	
	6	State types of air textured yarns available.	
	7	What are the applications of knit de knit textured yarns?	
	8	Enlist the techniques used for application of spin finish.	
	9	Name the most widely used fiber in the world.	
	10	Mention types of draw texturising machines.	
	11	Name the high performance fibers.	
	12	Write density of Glass fiber.	
	13	State types of methods used for the production of Aramid fiber.	
	14	Write application areas of carbon fiber.	
Q.2	(a)	Give the routes by which polyester and polyamide fibers can be made flame retardant.	03
	(b)	Enlist the desirable properties of Spin finish.	04
	(c)	Write short note on Aramid fiber.	07
		OR	
	(c)	Explain Carbon fibre manufacturing process with neat sketch.	07
Q.3	(a)	Explain mechanism of permanent set.	03
	(b)	The TPA process route presents greater difficulties compared with the DMT process – Give reasons.	04
	(c)	Explain Glass fibre manufacturing process with neat sketch.	07
		OR	
Q.3	(a)	Write in brief about antistatic polyester yarns.	03
	(b)	Discuss in brief chemical modification of nylon6 by poly (acrylamide) during polymerization.	04
	(c)	Write short note on Textured yarn defects.	07
Q.4	(a)	Discuss in brief about fibers with microvoids and microcrates.	03
	(b)	Give classification of textured yarn.	04
	(c)	Explain simultaneous draw texturising process in detail.	07
		OR	
Q.4	(a)	Write the advantages of sequential draw texturising.	03
	(b)	Give reasons why draw texurising is more economical.	04
	(c)	Discuss developments in Air Jet texturising.	07
Q.5	(a)	Discuss effect of spin finish on textured yarn quality.	03
	(b)	Explain contactless heater box.	04
	(c)	Explain principle of False twist texturising.	07

Q.5	(a)	Discuss effect of twist on textured yarn quality.	03
	(b)	Explain contact type heater box.	04
	(c)	Explain edge crimping in detail.	07
