

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER-III (NEW) EXAMINATION – WINTER 2024

Subject Code:3132906

Date:29-11-2024

Subject Name: Textile Materials

Time:10:30 AM TO 01:00 PM

Total Marks:70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		Marks
Q.1	(a) Define the terms: Tex, Denier, Count.	03
	(b) Draw classification of man-made fibers with examples.	04
	(c) Explain differential properties of fibres.	07
Q.2	(a) Give chemical composition of cotton fiber.	03
	(b) State the cultivation and production of linen fibre.	04
	(c) Write note on types of commercially available cotton.	07
	OR	
	(c) Explain in detail manufacturing process of acrylic fibre.	07
Q.3	(a) Write a note on Pina fiber.	03
	(b) How degumming of silk is being carried out?	04
	(c) Discuss in detail physical and chemical properties of nylon fibre.	07
	OR	
Q.3	(a) Write short note on Bamboo fibre.	03
	(b) Describe the properties of jute fibre.	04
	(c) Explain in detail about different steps involved in Manufacturing of Viscose rayon with neat diagram.	07
Q.4	(a) Write short note on coir fibre.	03
	(b) Write a note on cupraammonium rayon.	04
	(c) Discuss in detail physical and chemical properties of wool.	07
	OR	
Q.4	(a) What is density and degree of polymerization of viscose rayon? Draw cross sectional shape of viscose rayon.	03
	(b) Discuss the growth and cultivation of Ramie fibres.	04
	(c) How spinning of viscose rayon carried out? Explain with neat sketch.	07
Q.5	(a) Explain in detail about hemp fibre.	03
	(b) How cotton is cultivated?	04
	(c) Give the advantages of TPA over DMT route for Polyester.	07
	OR	
Q.5	(a) Write note on Tencel fibre.	03
	(b) Explain physical properties of cotton.	04
	(c) Explain wet and melt spinning process with neat sketch.	07
