

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2024

Subject Code:3162904

Date:17-05-2024

Subject Name:Technical Textiles

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: Protective Clothing.	03
	(b) Discuss about High chemical- and combustion-resistant organic fibres used in manufacturing of Technical textiles.	04
	(c) Discuss about Filament technical yarns used in the manufacturing of Technical textiles.	07
Q.2	(a) Thermal bonding can be used for which types of fibrous raw material?	03
	(b) Discuss in brief basic methods to waterproofing a fabric.	04
	(c) With a neat diagram explain Spun-laid process.	07
	OR	
	(c) What is meant by Calendering? Which are its main effects?	07
Q.3	(a) The mechanical properties of composites fabricated using braided reinforcement depend on what?	03
	(b) Discuss in brief about Antimicrobials used on textiles.	04
	(c) Discuss in detail the Coating techniques.	07
	OR	
Q.3	(a) Which are the methods of laminating?	03
	(b) Write short note on: Architectural membrane.	04
	(c) The interest in using nanotechnologies in the textile industry is increasing. Give reason.	07
Q.4	(a) Enlist desirable attributes of functional sportswear and leisurewear.	03
	(b) Write short note on Conveyor belts.	04
	(c) Discuss in brief fabrication of nanofibres.	07
	OR	
Q.4	(a) Discuss in brief requirements for an active sportswear.	03
	(b) Discuss in brief about key functional properties of Agrotextiles.	04
	(c) State and explain some of the implantable materials, in detail, with the help of neat diagrams.	07
Q.5	(a) Enlist the purposes for which Protective clothing is used in various industries.	03
	(b) Write short note on: Landscaping fabrics.	04
	(c) Discuss application areas & pre-requisite of Automotive textiles.	07
	OR	
Q.5	(a) Write short note on: Bullet proof vest.	03
	(b) Discuss in brief about Functions and applications of Packtech.	04
	(c) Discuss the filtration function of Geotextiles.	07
