

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI EXAMINATION – SUMMER 2025

Subject Code: 3162903

Date: 20-05-2025

Subject Name: Physical Testing

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) Distinguish between Random & Biased Sample.	03
	(b) Write a brief note on “Yarn Imperfections”.	04
	(c) With the help of neat sketch, explain the tearing strength tester.	07
Q.2	(a) Explain the oven dry method for measurement of moisture properties.	03
	(b) With the help of neat sketch, how yarn length is measured. Also give the significance of measuring the same.	04
	(c) With the help of neat sketch, explain the Shirley Trash Analyser.	07
	OR	
	(c) With the help of neat sketch, explain any one Fineness tester.	07
Q.3	(a) Give the significance of fibre testing.	03
	(b) Discuss the different methods of application of Load for measuring strength of textiles.	04
	(c) With the help of neat sketch, explain the Drapemeter.	07
	OR	
Q.3	(a) Give the significance of fabric testing.	03
	(b) Describe only the principle of Instron.	04
	(c) With the help of neat sketch, explain the pill box tester.	07
Q.4	(a) Determine the properties which define fabric handle.	03
	(b) Write a brief note on “AFIS”.	04
	(c) With the help of neat sketch, explain the comb sorter. Also explain the analysis of sorter diagram.	07
	OR	
Q.4	(a) Briefly describe how the GSM of fabrics can be measured.	03
	(b) Write a brief note on “Hairiness & it’s measurement”.	04
	(c) With the help of neat sketch, explain the stelometer.	07
Q.5	(a) Explain the beam balance principle wrt strength testing.	03
	(b) Write a brief note on “Measurement of maturity”.	04
	(c) With the help of neat sketch, explain the crease recovery tester.	07
	OR	
Q.5	(a) Give the significance of measuring water/moisture transport. How is it measured?	03
	(b) Briefly describe the instrument used for measurement of yarn count from a given fabric swatch.	04
	(c) With the help of neat sketch, explain any one twist tester.	07
