

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2023****Subject Code:3162903****Date:04-07-2023****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) What do you mean by a sample? Describe the different types of same.	03
	(b) Write a brief note on “Measurement of maturity”.	04
	(c) With the help of neat sketch, explain the bursting strength tester.	07
Q.2	(a) Explain any one method for measurement of moisture properties.	03
	(b) With the help of neat sketch, explain the Electronic Wrap Reel.	04
	(c) With the help of neat sketch, explain the Drapemeter.	07
	OR	
	(c) With the help of neat sketch, explain the pill box tester.	07
Q.3	(a) Give the main objectives of textile testing.	03
	(b) Write a brief note on “AFIS”.	04
	(c) With the help of neat sketch, explain the airflow method for measuring fibre fineness.	07
	OR	
Q.3	(a) Give the significance of yarn testing.	03
	(b) With the help of neat sketch, explain any one twist tester.	04
	(c) With the help of neat sketch, explain the Shirley Trash Analyser.	07
Q.4	(a) Determine the properties which define fabric handle.	03
	(b) Explain the principle of working of Instron.	04
	(c) With the help of neat sketch, explain the Fibrograph.	07
	OR	
Q.4	(a) Briefly describe how the thickness of fabrics can be measured.	03
	(b) Write a brief note on “Yarn Unevenness”.	04
	(c) With the help of neat sketch, explain the quadrant balance for measuring yarn count.	07
Q.5	(a) How is the assessment of fabric serviceability done?	03
	(b) How is the measurement of yarn count done from a given fabric swatch? Explain in detail.	04
	(c) With the help of neat sketch, explain how stiffness of fabric is measured.	07
	OR	
Q.5	(a) List the methods of measuring irregularity.	03
	(b) Define the terms: Air Permeability and Index of Irregularity.	04
	(c) Explain in detail HVI Testing.	07
