

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-VI (NEW) EXAMINATION – WINTER 2024****Subject Code:3162903****Date:20-11-2024****Subject Name:Physical Testing****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.
4. Simple and non-programmable scientific calculators are allowed.

		Marks
Q.1	(a) Write objectives of textile testing.	03
	(b) Give the classification of Abrasion test and mention the points required to be consider while performing abrasion resistance test.	04
	(c) Classify sampling types. Explain any one type of statistical sampling.	07
Q.2	(a) What is the effect of yarn twist on fabric properties?	03
	(b) Compare Direct and Indirect yarn numbering system.	04
	(c) State the different methods used for measuring fineness of fibres. Explain with neat sketch ATIRA fineness tester.	07
	OR	
	(c) Discuss the methods used for determining the fabric weight.	07
Q.3	(a) What is HVI? Which are properties measures by HVI?	03
	(b) With the help of neat sketch explain wet and dry bulb hygrometer.	04
	(c) Enlist methods of determine maturity. Explain differential dyeing method in detail.	07
	OR	
Q.3	(a) How drapability of a fabric can be improved?	03
	(b) What steps need to be taken to reduce the pilling tendency of woven or knitted fabric?	04
	(c) Explain with a neat diagram the principle and working tensile strength tester.	07
Q.4	(a) State the various parameters affecting the tearing strength of the fabric.	03
	(b) Write short note on cloth cover.	04
	(c) Explain the working of Uster Evenness Tester in detail.	07
	OR	
Q.4	(a) Define the terms: stress, strain and tenacity.	03
	(b) Explain CRT and CRE principle with diagram.	04
	(c) Write short note on Shirley crease recovery tester.	07
Q.5	(a) Define the term water proof, shower proof, water repellent	03
	(b) Explain in short about yarn hairiness measurement.	04
	(c) Explain fabric thickness gauge in detail.	07
	OR	
Q.5	(a) Define the following terms: Tex, Denier and Count.	03
	(b) What is short, medium and long term irregularity?	04
	(c) Explain the construction & principle of working of stelometer with the help of neat sketch.	07
