

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V (NEW) EXAMINATION – WINTER 2017****Subject Code: 2152906****Date: 13/11/2017****Subject Name: Physical Testing-I****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.

		MARKS
Q.1	(a) Discuss the objectives of Textile Testing.	03
	(b) Define the term stress, strain, work of rupture and work done.	04
	(c) With the help of neat sketch explain the working of Shirley moisture meter.	07
Q.2	(a) Write factors affecting regain of textile materials.	03
	(b) Explain the significance of sample in testing.	04
	(c) Explain in details the stelometer.	07
OR		
Q.3	(c) Explain working of lea CSP strength testing instrument with neat sketch.	07
	(a) Explain the importance of twist.	03
Q.3	(b) With neat sketch explain any one twist tester.	04
	(c) With the help of neat sketch explain the working principle of Shirley Trash Analyser.	07
	OR	
Q.3	(a) Briefly explain the periodic variation.	03
	(b) Explain the working principle of pressley tester.	04
	(c) Explain in details about maturity of cotton.	07
Q.4	(a) Calculate final sliver CV% on a draw frame from following data. Doubling: 6, Sliver CV% : 2.38, Draw Frame CV%: 3.7	03
	(b) Briefly explain about English count system.	04
	(c) Explain the instrument working of Air flow principle to measure fiber fineness.	07
OR		
Q.4	(a) What is meant by CRL, CRE and CRT?	03
	(b) What is a short, medium and long term irregularity?	04
	(c) Write short note on HVI.	07
Q.5	(a) State the different methods used for measuring fineness of the fibers.	03
	(b) Describe the term Fiber Quality Index.	04
	(c) With the help of bear shorter diagram, derive various length parameters of cotton.	07
OR		
Q.5	(a) State the different methods used to measure twist in yarn.	03
	(b) Explain quadrant balance for determining yarn count.	04
	(c) Explain the working principle of Uster evenness tester in details.	07
