Seat No.:	Enrolment No.

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

BE - SEMESTER-VI (OLD) - EXAMINATION – SUMMER 2017

Subject Code: 162903 Subject Name: Physical Testing			Date: 27/04/2017	
Ti	me: 1 truction 1 2	10:30 AM to 01:00 PM  Total Marks: ons: Attempt all questions.	70	
Q.1	(a) (b	Explain only the principle of pendulum lever for strength test. Also write briefly on instrument based on the same.  With neat diagram explain Martindale abrasion tester.	07 07	
Q.2	(a) (b	Why testing is necessary? Briefly explain the objective of testing.  Explain the working principle of ballistic strength testing machine. Also explain working of the instrument based on the same.  OR	07 07	
	(b	Explain take up twist tester.	07	
Q.3	(a) (b	Derive the equation for relation between yarn count and twist factor. What is sample? Which are the factors affecting sampling? Explain different types of sampling method in detail.	07 07	
0.2	(2)	OR	07	
Q.3	(a) (b	Explain Anderson yarn tester. What is FQI? Explain Shirley trash analyzer briefly.	07 07	
Q.4	(a)	Define moisture regain and moisture content. Which are the factors affecting the regain of the textile material.	07	
	(b	Explain variance - length (V-L) curve in detail.  OR	07	
Q.4	(a) (b	With neat diagram explain Shirley photo electric stapler.  What is meant by addition of irregularity and effect of doubling?  Calculate drawn sliver CV% on a draw frame from following data.  Undrawn Sliver CV%: 2.1, Draw Frame CV%: 3.85	07 07	
Q.5	(a)	Which methods are used to measure crease recovery in fabric? Write on any one in brief.	07	
	(b	Explain hydraulic bursting strength tester.  OR	07	
Q.5	(a) (b	Define CRL, CRE, and CRT. List the equipment working on these principles. Which methods are used to find out fiber fineness? Explain working of any one briefly.	07 07	

\*\*\*\*\*