

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI (NEW) EXAMINATION – WINTER 2023

Subject Code:3162903

Date:02-12-2023

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) List out the main objectives of Textile Testing.	03
(b) Define Moisture Content & Moisture Regain.	04
(c) With the help of neat sketch, explain any one instrument for measuring fabric GSM.	07
Q.2 (a) Give the significance of yarn testing.	03
(b) With the help of neat sketch, explain the wrap reel for yarn measurement.	04
(c) With the help of neat sketch, explain the bursting strength tester.	07
OR	
(c) With the help of neat sketch, explain the shirley moisture meter.	07
Q.3 (a) Describe how twist is measured by twist contraction principle.	03
(b) With the help of neat sketch, explain the densimeter.	04
(c) With the help of neat sketch, explain the Drapemeter.	07
OR	
Q.3 (a) Define Random Sample & Biased Sample.	03
(b) With the help of neat sketch, explain the Trash Analyser.	04
(c) With the help of neat sketch, explain the abrasion tester.	07
Q.4 (a) Define Breaking Load & Tenacity.	03
(b) With the help of neat sketch, explain the Fibrograph.	04
(c) With the help of neat sketch, explain the Uster evenness tester.	07
OR	
Q.4 (a) Determine the properties which define fabric serviceability.	03
(b) Explain only the principle of measuring fineness by airflow method.	04
(c) With the help of neat sketch, explain the Lea strength tester.	07
Q.5 (a) Define Bending Modulus & Flexural Rigidity.	03
(b) Discuss the advantages of Instron.	04
(c) Write a brief note on “HVI Testing”.	07
OR	
Q.5 (a) Give the difference between wrinkle and crease.	03
(b) Write a brief note on “Yarn Imperfections”.	04
(c) With the help of neat sketch, explain the air permeability tester.	07
