

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V (NEW) - EXAMINATION – SUMMER 2018

Subject Code:2152906

Date:02/05/2018

Subject Name:Physical Testing-I

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.

		MARKS
Q.1	(a) List out the main objectives of testing of textiles.	03
	(b) Explain only the principle of Sheffield Micronaire.	04
	(c) With the help of neat sketch, explain the Shirley Trash Analyser.	07
Q.2	(a) Discuss the main advantages of HVI testing.	03
	(b) Define the terms Moisture Content & Moisture Regain. Also give the relation between the two.	04
	(c) Give the significance of using wrap reel. With the help of neat diagram, describe the construction and working of wrap reel.	07
OR		
	(c) With the help of neat diagram, describe any one instrument for twist measurement based on twist contraction principle.	07
Q.3	(a) What do you mean by span length? Name the instrument used to determine it.	03
	(b) Discuss, how the chemical ovens are used for measuring moisture in textiles.	04
	(c) With the help of neat sketch, explain the Shirley Photo Electric Stapler.	07
OR		
Q.3	(a) Give the flowchart for grading system of Indian cotton.	03
	(b) Explain the gravitational methods of fibre fineness.	04
	(c) Write a brief note on “Application of AFIS”.	07
Q.4	(a) List out the different instruments used for measuring humidity.	03
	(b) Describe the core sampling technique for wool.	04
	(c) Write a brief note on “Measurement of Maturity”.	07
OR		
Q.4	(a) List the methods in which the load can be applied wrt. Strength testing of textiles.	03
	(b) Explain the analysis of sorter diagram.	04
	(c) With the help of neat sketch, explain the lea strength tester.	07
Q.5	(a) Briefly discuss on universal yarn numbering system with illustration.	03
	(b) Explain the only the working principle involved with Uster evenness tester.	04
	(c) With the help of neat diagram, explain the construction and working of Beesley balance.	07
OR		
Q.5	(a) Discuss the important causes of yarn hairiness.	03
	(b) Describe the direct yarn numbering systems.	04
	(c) Discuss any one method to test the yarn irregularities by visual examination method.	07