Seat No.:	Enrolment No.

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

BE – SEMESTER – V (NEW) EXAMINATION – WINTER 2015

Subject Code: 2152906 Subject Name: Physical Texting - I Time:10:30am to 1:00pm Instructions:			Date:10/12/2015	
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	2. N	ttempt all questions. Iake suitable assumptions wherever necessary. igures to the right indicate full marks.		
Q.1	(a)	Discuss the objectives of Textile Testing. Also explain the significance of samples in testing.	07	
	<b>(b)</b>	With the help of necessary figures, describe how the airflow method is used for measurement of fibre fineness.	07	
Q.2	(a) (b)	Write a brief note on "Cotton Quality & Grading".  Discuss the basic principle, construction & working of AFIS.  OR	07 07	
	<b>(b)</b>	With the help of neat sketch, explain any one instrument used to measure the tensile strength of a single yarn.	07	
Q.3	(a) (b)	Explain the different methods used for determining the maturity of cotton fibres. With the help of neatsketch, explain the construction & principle of working of Shirley Photo Electric Stapler.  OR	07 07	
Q.3	(a)	With the help of neat sketches, explain how the moisture regain is measured using CSIRO Direct Reading Regain Tester.	07	
	<b>(b)</b>	With the help of neat sketch, explain the construction & principle of working of Stelometer.	07	
Q.4	(a) (b)	Explain importance of twist. Also, with neat sketch explain take-up twist tester. With neat sketch explain quadrant balance for determining yarn count.  OR	07 07	
Q.4	(a)	Define the following terms:  1. Tex  2. Denier  3. Cotton Count	06	
	(b)	<ol> <li>Do as directed:         <ol> <li>If the metric count is 50 then what will be the English cotton count?</li> <li>If the English cotton count is 30 then what will be the Tex count?</li> </ol> </li> <li>If a skein of 100mt of filament viscose yarn weighs 1.67 gm. calculate its denier.</li> <li>A lea of cotton yarn weighs 40 grains. Calculate its count.</li> </ol>	08	
Q.5	(a)	With neat sketch explain photo electric principle method for measuring hairiness in spun yarn.	07	
	<b>(b)</b>	With a neat sketch explain any one instrument for testing yarn evenness based on compression method.	07	
~ <del>-</del>	, .	OR	<u> </u>	
Q.5	(a)	With neat sketch explain method for measuring hairiness in spun yarn based on singeing method.	07	

(b) How cutting and weighing method can be used for testing evenness properties of spun yarn?

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**07**