Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V (NEW) - EXAMINATION – SUMMER 2016

Subject Code:2152906 **Date:11/05/2016**

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.**

Q.1	**(a)**	With the help of neat sketch, explain the construction & principle of working of "Shirley Trash Analyser"	**07**
	(b)	State the different methods used for measuring fineness of the fibres. Describe any one method in detail.	**07**
Q.2	**(a)**	Briefly describe any two sampling techniques used for sampling of cotton fibres.	**07**
	(b)	Write a brief note on "Maturity of Cotton Fibres & its Measurement".	**07**
		OR	
	(b)	Write a brief note on "HVI Testing"	**07**
Q.3	**(a)**	With the help of neat sketches, explain how the moisture regain is measured using Shirley Moisture Meter.	**07**
	(b)	Define the term "Span Length". Describe briefly the instrument used to measure it.	**07**
		OR	
Q.3	**(a)**	With the help of neat sketch, explain the priciple, construction & working of Lea Strength Tester.	**07**
	(b)	With the help of neat sketch, explain the construction & principle of working of the Fibre Bundle Strength Tester.	**07**
Q.4	**(a)**	Define twist. Explain with neat sketch twist to break method for twist measurement.	**07**
	(b)	With neat sketch explain in detail any one method for determining yarn count.	**07**
		OR	
Q.4	**(a)**	Define Yarn numbering system. Write the merits and demerits of Direct and Indirect yarn numbering system.	**10**
	(b)	Fill in the blanks: 1. Conversion from English count to Metric count is _____. 2. Conversion from Tex to Denier is _____. 3. 1 Pound (lb) = _____ grains. 4. In Indirect yarn numbering system _____ the count finer is the yarn.	**04**
Q.5	**(a)**	Explain in brief short, medium and long term variation.	**07**
	(b)	Enlist the methods for measuring the hairiness in the spun yarn. Also, explain any one method in detail.	**07**
		OR	
Q.5	**(a)**	With a neat sketch explain any one instrument for testing yarn evenness based on compression method.	**07**
	(b)	Write a note on index of irregularity.	**07**

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