Seat No.:	Enrolment No.

Subject Code: 2162903

**Subject Name: Physical Testing-II** 

Time: 10:30 AM to 01:00 PM

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

BE - SEMESTER-VI (NEW) - EXAMINATION - SUMMER 2017

Date: 27/04/2017

**Total Marks: 70** 

Inst	ructio	ons:	
	1.	Attempt all questions.	
	2.	ı v	
	3.	Figures to the right indicate full marks.	
			MARKS
Q.1		Short Questions	14
Ų.1	1	Define the terms CRL and CRE.	17
	2	Sate the name of various methods used to measure the water resistance	
	2	of a fabric.	
	2	What is crimp?	
	3	What is factional cover?	
	5 6	State the name of various tensile strength testing methods.	
	7	What is crimp interchange?  Why tooring strength of the twill or mett febrie is higher than the plain	
	,	Why tearing strength of the twill or matt fabric is higher than the plain fabric.	
	8		
		State the name of various methods used for measuring tongue tear test.	
	9	Mention the types of fabric for which the bursting strength test is	
	4.0	preferred.	
	10	State the standard atmospheric condition for fabric testing.	
	11	State the name of instrument used to measure pilling.	
	12	Mention the main factors affecting fabric handles.	
	13	What is Drape?	
	14	Define the term Air permeability.	
<b>Q.2</b>	(a)	Define the term flexural rigidity and explain briefly.	03
	<b>(b)</b>	Explain the effect of crimp on fabric properties.	04
	<b>(c)</b>	Explain in details the "Shirley Stiffness Tester".	07
		OR	
	(c)	Explain in details the Shirley crimp tester.	07
Q.3	(a)	What are the objects of fabric testing?	03
	<b>(b)</b>	Briefly explain about the sample preparation for tensile strength testing.	04
	<b>(c)</b>	Write in details on pendulum type tensile strength tester.	07
		OR	
Q.3	(a)	Explain about the factors responsible for pilling.	03
	<b>(b)</b>	Explain the quadrant balance for measuring Fabric GSM.	04
	<b>(c)</b>	Explain briefly about the Shirley air permeability tester.	07
<b>Q.4</b>	(a)	How drapability of a fabric can be improved?	03
	<b>(b)</b>	State the various parameters affecting the tearing strength of the fabric.	04
	<b>(c)</b>	Explain the working of any one instrument for testing the tearing	07
		strength of fabric.	
_		OR	
<b>Q.4</b>	(a)	Mention the purpose of fabric serviceability testing.	03
	<b>(b)</b>	What steps need to be taken to reduce the pilling tendency of woven or knitted fabric?	04
	<b>(c)</b>	Explain with a neat diagram the water spray test for fabric	07

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Q.5	(a)	Define the term stiffness. Mention the different methods available to measure the fabric stiffness.	03
	<b>(b)</b>	Briefly explain the various methods used to measure threads per inch of a fabric.	04
	(c)	Explain the working of hydraulic busting strength tester with a neat sketch.	07
		OR	
Q.5	(a)	Explain briefly the principle of CRE in brief.	03
	<b>(b)</b>	Give the classification of Abrasion test and mention the points required to be consider while performing abrasion resistance test.	04
	(c)	Explain with a neat diagram the Martindale Abrasion Tester.	07

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