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

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–IV (NEW) - EXAMINATION – SUMMER 2017

Subject Code: 2142904 **Date: 30/05/2017**

Subject Name: Fibre Physics

Time: 10:30 AM to 01:00 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		**Short Questions**	**14**
	1	What is Stress?	
	2	What is Breaking Load?	
	3	What is Strain?	
	4	What is Equilibrium?	
	5	What is Differential Heat of Sorption?	
	6	What is Fiber Swelling?	
	7	What is Density?	
	8	The density of cotton is _____	
	9	What is Refractive index?	
	10	What is Degree of Polymerisation?	
	11	What is Copolymer?	
	12	What is Work of Rupture?	
	13	The Density Gradient Tube is use for Measure Fiber _____	
	14	The Friction of Wool is depends upon _____	
Q.2	**(a)**	Discuss an Addition Polymerisation.	**03**
	(b)	Discuss the Moisture Regain and Moisture Content.	**04**
	(c)	Explain the properties of Cotton.	**07**
		OR	
	(c)	Wirte short note on Silk.	**07**
Q.3	**(a)**	Discuss Work Factor.	**03**
	(b)	Explain the Yield Point by Meredith method.	**04**
	(c)	Write short note on Electon Microscopy.	**07**
		OR	
Q.3	**(a)**	Describe Reflexion.	**03**
	(b)	Discuss the measurement of Inter Fiber Friction.	**04**
	(c)	Explain in detail about Bending Rigidity.	**07**
Q.4	**(a)**	What is Absolute Humidity?	**03**
	(b)	Discuss Primary Creep and Secondary Creep?	**04**
	(c)	Give Definition for different type of Swelling also show their relation with proper explaination.	**07**
		OR	
Q.4	**(a)**	What is importance of Fiber Friction?	**03**
	(b)	Explain Capstan Method for measurement of fiber Friction.	**04**
		friction.	
	(c)	Explain Buckle and Pollitt's method for measurement of Fiber Friction.	**07**
Q.5	**(a)**	What is Thermal Conductivity?	**03**
	(b)	Discuss the Fiber Fracture Morphology of Cotton.	**04**

	(c)	Discuss the Effect of Moisture, Temperature, and Frequency on Dielectric Properties of fibers.	**07**

OR

Q.5	**(a)**	What is Electrical Resistance?	**03**
	(b)	Discuss the Thermal Expansion.	**04**
	(c)	Discuss in detail The Factors Affecting Electrical Properties of Fiber.	**07**

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