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

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – II • EXAMINATION – SUMMER • 2014

Subject code: 1722401 **Date: 16-06-2014**

Subject Name: Plastics Testing Technology

Time: 02:30 pm - 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)**	Draw a typical Stress-Strain Curve of plastics and explain.	**07**
	(b)	Define flexural strength. What are the factors affecting the values of flexural strength and explain.	**07**
Q.2	**(a)**	Why testing is necessary? Explain specification and standard.	**07**
	(b)	What is conditioning? Why it is necessary? Explain.	**07**
		OR	
	(b)	Explain how will you measure tensile strength along with factors affecting the test results?	**07**
Q.3	**(a)**	Define hardness. Write various methods of measuring hardness of plastics.	**07**
	(b)	Define arc resistance. Explain a method to determine arc resistance of plastics.	**07**
		OR	
Q.3	**(a)**	Define dielectric strength. How do you determine it for plastics?	**07**
	(b)	Define density of plastics. How do you determine it for plastics as per ASTMD792?	**07**
Q.4	**(a)**	Explain Izod impact strength test in detail.	**07**
	(b)	Define VST. Describe ASTM method to measure VST.	**07**
		OR	
Q.4	**(a)**	What is HDT? Describe the test method as per ASTMD 648 and what are the factors affects on HDT?	07
	(b)	What is ESCR? Explain ESCR test for plastics.	**07**
Q.5	**(a)**	Write a short note on DSC.	**07**
	(b)	Define haze and gloss. Explain the test procedure for determination of gloss.	**07**
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Q.5	**(a)**	Enlist the various tests conducted on plastic films and explain.	**07**
	(b)	Explain accelerated weather resistance test.	**07**