## **GUJARAT TECHNOLOGICAL UNIVERSITY** ME – SEMESTER III (NEW) – EXAMINATION – WINTER-2016

ME – SEMESTER III (NEW) – EXAMINATION – WINTER-2016			
Subject Code: 2732404 Date:25/10/			<b>16</b>
Subject Name: Plastics Testing Technology			
Tir	Time:02:30 pm to 05:00 pm Total Marks:		
Instructions:			
	1.		
	2.	Make suitable assumptions wherever necessary.	
	3.	Figures to the right indicate full marks.	
Q.1	(a)	What is stress? Mention 5 types of stresses and explain.	07
Ľ	(b)	Write about process induced property variations.	07
Q.2	<b>(a)</b>	Explain the need of quality management system for plastics testing.	07
Q.2	(b)	Mention the identification of 7 different plastic materials by simple tests.	07
		OR	
	<b>(b)</b>	What are the factors affecting mechanical properties? Explain.	07
Q.3	(a)	Mention any four hardness scales and explain their correlation and applications.	07
-	<b>(b)</b>	What is VST? Explain VST testing method with sketch.	07
		OR	
Q.3	<b>(a)</b>	What is DTUL? Explain ASTM D 648 test method with neat sketch.	07
	<b>(b</b> )	Explain (i) Glass transition temperature (ii) Co-efficient of thermal expansion.	07
Q.4	<b>(a)</b>	Write short notes on (i) Refractive index (ii) Luminous transmittance	07
	<b>(b)</b>	Explain (i) Volume and Surface resistivity (ii) Arc resistance	07
		OR	
Q.4	(a)	Write short notes on (i) Dissipation factor (ii) Specular gloss	07
	<b>(b)</b>	What is antistatic plastic? Explain any one antistatic test method with sketch.	07
Q.5	<b>(a)</b>	Explain (i) Gas permeability (ii) Weatherability	07
	<b>(b</b> )	Explain the emitting pipe systems testing method according to IS:13488 -	07
		2008.	
0.5			0.7
Q.5	(a) (b)	Explain the HDPE films testing method according to IS:10889 - 2004. Discuss the CAE techniques to test laminates and FRP/composite based	07 07
	<b>(b)</b>	products.	07
		products.	

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