GUJARAT TECHNOLOGICAL UNIVERSITY

		RE - SEMESTER VI. FYAMINATION SUMMER 2016					
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Subject Code:102505 Subject Name:Plastic Process Instrumentation and Process Control Time: 10:30 AM to 01:00 PM Total Marks: 70							
				Ins	structi 1	ODS: Attempt all questions	
				2. Make suitable assumptions wherever necessary.			
	3	. Figures to the right indicate full marks.					
Q.1	(a)	Explain in brief - Barrel temperature measurements & Melt temperature Measurements in Extrusion Process.	07				
	(b)	Draw a schematic diagram of High Sensitivity Controller and explain its Working in detail.	07				
Q.2	(a)	Enlist Classification of Electrical Measuring Instruments and Explain Any two.	07				
	(b)	What is meaning of On-Machine monitoring. Explain On-Machine monitoring For Injection Molding Process.	07				
		OR					
	(b)	Give expressions for stored quantity, driving force, flow resistance and capacity for the system of (i) thermometer (ii) Liquid level process (iii) Mixing level process and RC circuit	07				
Q.3	(a)	Define, draw and derive equations for (i) Impulse function and (ii)Sinusoidal	07				
	(b)	Define, draw and derive equations for (i) Step Response and (ii) Impulse Response	07				
		OR					
Q.3	(a)	Explain in Brief Accuracy, Precision, and Repeatability	07				
	(b)	Explain in Brief Static error, Random error and Source of Error	07				
0.4	(a)	With the help of neat sketch explain Strain Gauge.	07				
X	(b)	Derive an equation for Impulse Response for less than 1, equal to 1 and more Than 1.	07				
		OR					
Q.4	(a)	Derive the equation for the response of Interacting Liquid Level System.	07				
	(b)	Make a comparison sheet for various Pressure Transducers used in Extrusion Process.	07				
Q.5	(a)	With the help of figure explain (i) Period of Oscillation (ii) Natural Period of Oscillation.	07				
	(b)	Explain Eddy Current Tachometer with suitable sketch. OR	07				
Q.5	(a)	Write short note on thermocouples	07				
	(b)	Write a short note on PID Injection pressure control.	07				
