Seat No.:	Enrolment No.

		GUJARAT TECHNOLOGICAL UNIVERSITY	
~		BE - SEMESTER-VI (OLD) - EXAMINATION - SUMMER 2017	
	•	t Code: 162303 Date: 27/04/20	17
	-	t Name: Plastic Process Instrumentation and Process Control	
		10:30 AM to 01:00 PM Total Marks:	70
Ins	2	ons: . Attempt all questions Make suitable assumptions wherever necessary Figures to the right indicate full marks.	
Q.1	(a) (b)	Explain the block diagram of instrumentation process with neat sketch. Define Accuracy, Precision, Repeatability, and Dead Zone.	07 07
Q.2	(a) (b)	Write short note Tachogenerator. List the types of pressure transducers and explain the elastic pressure transducers with neat diagram.	07 07
		OR	
	(b)	Define and describe static error, systematic error, random error and source of errors.	07
Q.3	(a) (b)	Explain open loop system and closed loop system with neat diagram. Explain radiation pyrometer with neat sketch. OR	07 07
Q.3	(a) (b)	Give comparison between P, PI, and PID type of control action. Explain the total injection molding process control.	07 07
Q.4	(a)	Define, draw and derive equations for (i) Step Response and (ii) Impulse Response.	07
	(b)	What are the different methods of Temperature measurement? Explain about Resistance thermometer.	07
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Q.4	(a) (b)	Short note on Strain Gauge pressure transducer. With neat sketch explain diaphragm pressure transducer.	07 07
Q.5	(a) (b)	Write short note on Dynamic characteristics of an instrument. Write short note on thermocouples.	07 07
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Q.5	(a) (b)	Define process control. Explain about the importance of Process control. Explain Capacitive type pressure transducer.	07 07
