GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–VI(NEW) – EXAMINATION – SUMMER 2019

Subject Code:2162303   **Date:10/05/2019**
Subject Name:Plastic Process Instrumentation and Process Control
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	(a)	Define Calibration & explain general steps to perform it.	03
	(b)	Define Range, Precision & Accuracy.	04
	(c)	Explain block diagram of instrumentation process with neat sketch.	07
Q.2	(a)	Explain closed loop transfer function.	03
	(b)	Explain CASCADE control system.	04
	(c)	Describe the advantages and disadvantages of filled system thermometer with neat sketch.	07
		OR	
	(c)	Explain the total injection molding process control.	07
Q.3	(a)	Explain open loop transfer function.	03
	(b)	Describe piezoelectric pressure transducer.	04
	(c)	Explain Strain gauge pressure transducers with neat diagram.	07
		OR	
Q.3	(a)	Explain derivative controllers.	03
	(b)	Explain C type bourdon tube transducer.	04
	(c)	Explain Capacitive type pressure transducer.	07
Q.4	(a)	List different types of pressure transducers.	03
	(b)	Explain sources of error.	04
	(c)	Explain diaphragm pressure transducers with neat diagram.	07
		OR	
Q.4	(a)	Explain thermistors?	03
	(b)	Write a short note on static characteristics.	04
	(c)	Explain different types of Manometers?	07
Q.5	(a)	Explain open loop control system with neat diagram.	03
	(b)	Explain Seeback effect & thermocouple.	04
	(c)	Explain construction, working, advantages & disadvantages of LVDT.	07
		OR	
Q.5	(a)	Explain proportional controllers.	03
	(b)	Explain basic elements of closed loop system.	04
	(c)	Explain Radiation pyrometer with neat sketch.	07

****