Seat No.: _____ Enrolment No. _____

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**

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