Seat No.: _____ *Enrolment No._____*

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VI • EXAMINATION – SUMMER • 2015

Subject code: 162303 **Date:08/05/2015**

Subject Name: Plastic Process Instrumentation and Process Control

Time: 10.30am-01.00pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	How to measure the rotational speed of a machine element? Explain.	**07**
	(b)	Define Range, Sensitivity and Resolution of an instrument.	**07**
Q.2	**(a)**	What are the different types of Temperature controllers? Explain.	**07**
	(b)	Explain the thermal characteristics of the System.	**07**
		OR	
	(b)	Write a short note on Ultra sound transmission line.	**07**
Q.3	**(a)**	What are the moulding parameters of an Injection moulding machine? Explain about any one.	**07**
	(b)	Explain about PID Injection Pressure Control.	**07**
		OR	
Q.3	**(a)**	List out the various parts of an injection moulding machine & mention the function of any five.	**07**
	(b)	What are the advantages of Micro Processor based Process Controller?	**07**
Q.4	**(a)**	What are the requirements of Extruder Instrumentation?	**07**
	(b)	Describe the importance of Melt Pressure.	**07**
		OR	
Q.4	**(a)**	Explain about the different types of Pressure Transducers used in Extruder.	**07**
	(b)	How to measure the Barrel Temperature of an Extruder?	**07**
Q.5	**(a)**	What are the different cooling methods used in Blow Mould? Explain about any one.	**07**
	(b)	What is a Sensor? Explain about Temperature sensors.	**07**
		OR	
Q.5	**(a)**	Explain how to control the parison thickness of an extrusion moulding process.	**07**
	(b)	Define Process Control. What is the need for Instrumentation?	**07**

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