Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA ENGINEERING - SEMESTER–V • EXAMINATION – SUMMER 2013

Subject Code: 351702 **Date: 29-11-2013**

Subject Name: Process Instrumentation - II

Time: 02:30 pm - 05:00 pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **English version is considered to be Authentic.**

Q.1	(a)	What is Seeback Effect? Explain Thermocouple construction with diagram.	**07**
	(b)	Explain any one non-contact type Temperature measurement.	**07**
Q.2	(a)	State different types of Thermocouple with positive and negative extension, temperature range.	**07**
	(b)	Which types of error will be generated in Filled System Thermometry?	**07**
		OR	
	(b)	Temperature measurement by Fiber optic.	**07**
Q.3	(a)	Explain any two types of thermostat.	**07**
	(b)	Magnetic type Floating level switch.	**07**
		OR	
Q.3	(a)	Construction and Working of Air Purge System for level measurement.	**07**
	(b)	Explain capacitance type level measurement with its working principle.	**07**
Q.4	(a)	Define Torque. How we measure Torque using Strain Gauge?	**07**
	(b)	Difference between Force and Torque. Explain Electric Torsion meter.	**07**
		OR	
Q. 4	(a)	Working principle of piezo-electric sensor. How it used to measurevibration?	**07**
	(b)	Explain elastic force meter with application.	**07**
Q.5	(a)	Why level measurement is required in process industries? Explain Ultrasonic level detector.	**07**
	(b)	Explain various effects related with filled system	**07**
		OR	
Q.5	(a)	State different types of filled system Thermometer. Explain Class-I filled system .	**07**
	(b)	Explain RTD construction and working with diagram.	**07**

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