Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V- EXAMINATION – SUMMER 2016

Subject Code: 151701 **Date: 21/05/2016**

Subject Name: Industrial Measurement

Time: 02:30 PM to 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.**

Q.1	**(a)**	Explain Seeback, Peltier & Thomson effects. Also explain laws of intermediate temperature.	**07**
	(b)	Discuss Principle, working & application of Strain gauge pressure measuring instrument.	**07**
Q.2	**(a)**	Explain Ultrasonic Level switches in detail.	**07**
	(b)	Discuss construction & basic principle of RTD. List out different metals used in RTD.	**07**
		OR	
	(b)	Explain working of Orifice. Also give its classification, machining methods & types of Tapping.	**07**
Q.3	**(a)**	List down low pressure measuring instrument & explain working of any one.	**07**
	(b)	Explain positive displacement type flow meters in detail.	**07**
		OR	
Q.3	**(a)**	Explain construction & working of Dead weight tester.	**07**
	(b)	Explain working & principle of turbine flow meter.	**07**
Q.4	**(a)**	With advantages & disadvantages explain Resistive method for level measurement.	**07**
	(b)	Discuss 2-wire & 3-wire Wheatstone bridge circuit to measure RTD resistance also give advantages & disadvantages of each.	**07**
		OR	
Q.4	**(a)**	Define hydrostatic pressure. Give the classification of the hydrostatic pressure measuring devices & explain any one in detail.	**07**
	(b)	Explain optical pyrometer in detail.	**07**
Q.5	**(a)**	Explain DP cell for level measurement in close tank system.	**07**
	(b)	Explain construction & working principle of Coriolis Mass flow meter.	**07**
		OR	
Q.5	**(a)**	List down the types of manometers used for pressure measurement. Explain pressure switch in detail & explain elastic primary transducer used in it.	**07**
	(b)	Explain Vortex flow meter with advantages & disadvantages.	**07**

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