Seat No.:	Enrolment No
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GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII • EXAMINATION – WINTER 2013

	U	Code: 1/0904 Date: 28-11-201	3
	•	Name: Industrial Instrumentation	
		0:30 TO 01:00 Total Marks: 7	0
Ins	2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a)	What is Transducer? Explain advantages of electrical transducer.	07
	(b)	Explain difference between 1) Active transducer-Passive transducer. 2) Primary transducer- Secondary transducer.	07
Q.2	(a)	What is Gauge factor and Piezo resistive effect? Derive the expression for that in terms of passion's ratio.	07
	(b)	State different temperature compensation techniques used with strain gauge. Explain any one in detailed.	07
		OR	
	(b)	Explain semiconductor strain gauge. Also state its advantages and applications.	07
Q.3	(a)	Explain construction and working of L.V.D.T with appropriate characteristics.	07
	(b)	Write short note on Hall effect transducer.	07
		OR	
Q.3	(a)	Explain working of Piezoelectric transducer. State it's applications.	07
	(b)	Write short note on Synchros.	07
Q.4	(a)	Explain construction and working of Column type load cell. State its applications.	07
	(b)		07
		OR	
Q.4	(a)	State different methods for torque measurement. Explain any one in detailed.	07
	(b)	Write short note on Hot wire anemometer.	07
Q.5	(a)	State different pressure measurement techniques. Explain any one in detail.	07
	(b)	Write short note on Thermister for temperature measurement	07
		OR	
Q.5	(a)	State different vacuum pressure measurement techniques. Explain any one in detail.	07
	(b)	Explain Thermocouple for temperature measurement.	07
