

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV • EXAMINATION – WINTER • 2014****Subject Code: 141702****Date: 02-01-2015****Subject Name: Transducers****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.

- Q.1 (a)** Explain in detail the functional elements of an Instrument. **07**
(b) List out types of inferential type of flow meters and explain ultrasonic flow meter. **07**
- Q.2 (a)** Explain all static characteristics of instruments. **07**
(b) Explain in detail Resistance strain Gauge. **07**
- OR**
- (b)** Explain Vibration method of Density Measurement. **07**
- Q.3 (a)** Explain in detail Linear variable –Differential Transformer. **07**
(b) Discuss capacitance level indicator and radiation level detector in detail. **07**
- OR**
- Q.3 (a)** Discuss air purge system and ultrasonic system to measure the liquid. Level. **07**
(b) Explain Non-contact type Thickness measurement in detail. **07**
- Q.4 (a)** Explain in detail classification of transducers with example. **07**
(b) Explain in detail any two quantity flow meters. **07**
- OR**
- Q.4 (a)** Explain in detail basic operating principal, advantages and disadvantages and parts of variable head flow meters. **07**
(b) Classify electrical telemetry systems. Explain any two in brief. **07**
- Q.5 (a)** What is temperature? And write in detail about Temperature Scales. **07**
(b) Explain all type of Manometers and errors in Manometer. **07**
- OR**
- Q.5 (a)** List out types of electrical temperature measuring instruments and explain Each in brief. **07**
(b) Discuss McLeod gauge in detail. **07**
