

GUJARAT TECHNOLOGICAL UNIVERSITY**B.E. Sem-IV Examination June- 2010****Subject code: 141702****Subject Name: Transducers****Date: 21 /06 /2010****Time: 10.30 am – 01.00 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) List out types of electrical temperature measuring instruments and explain each in brief. **07**

(b) Discuss air purge system and ultrasonic system to measure the liquid level. **07**

Q.2 (a) Explain different primary elements used in differential flow meters. **07**

(b) List out different static characteristics of an instrument and explain each in brief. **07**

OR

(b) Discuss LVDT in detail. **07**

Q.3 (a) Explain working of different pyrometers. **07**

(b) Discuss different force balance pressure gauges in detail. **07**

OR

Q.3 (a) What is pH? Explain different types of electrodes used to measure the pH. **07**

(b) Classify electrical telemetry systems. Explain any two in brief. **07**

Q.4 (a) Explain any two types of thickness measurement system. **07**

(b) Discuss in line rotating torque sensor in detail. **07**

OR

Q.4 (a) Discuss capacitance level indicator and radiation level detector in detail. **07**

(b) Explain variable area flow meters. **07**

Q.5 (a) Discuss different temperature scales in detail. Define boiling point, freezing point and triple point. **07**

(b) Explain hydrostatic weighing densitometer in detail. **07**

OR

Q.5 (a) Discuss McLeod gauge in detail. **07**

(b) Explain Nutating disc and Oscillating piston type flow meters. **07**
