

Seat No.: _____

Enrolment No. _____

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
