

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

# GUJARAT TECHNOLOGICAL UNIVERSITY

M.E Sem-II Examination July 2010

Subject code: 720310

Subject Name: Industrial Measurements

Date: 09 / 07 2010

Time: 11.00am – 1.30pm

Total Marks: 60

## Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Describe dynamic characteristics and dynamic response of the Instrument. 06  
(b) Explain Linear Variable Differential Transformer. 06
- Q.2** (a) Explain operating principle of variable head flow meter. 06  
(b) Explain strain gauge in brief and derive expression for gauge factor. 06
- OR**
- (b) Explain any two electrical telemetry techniques. 06
- Q.3** (a) Explain in-line rotating torque sensor. 06  
(b) Describe vibrating tube densitometer. 06
- OR**
- Q.3** (a) Describe torque tube displacer type liquid level detector. 06  
(b) Explain level measurement techniques using laser. 06
- Q.4** (a) Explain rotameter. 06  
(b) Explain turbine flow meter. 06
- OR**
- Q.4** (a) Explain magnetic flow meter. 06  
(b) Explain rotating vane type quantity flow meter. 06
- Q.5** (a) Describe Mc-leod gauge for vacuum measurement. 06  
(b) Explain capacitive pressure transducer. 06
- OR**
- Q.5** (a) Explain Resistance Temperature Detector alongwith it's measuring circuit. 06  
(b) Explain thermocouple principle and enumerate thermocouple types alongwith name of their constituent metals. 06

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