

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-V • EXAMINATION – SUMMER 2013****Subject Code: 151701****Date: 16-05-2013****Subject Name: Industrial Measurement****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) Explain 4-lead wire compensation of RTD. **07**  
(b) Explain cold-junction compensation in thermocouple. **07**

**Q.2** (a) Explain thermister in detail. **07**  
(b) Explain optical pyrometer with neat sketch. **07**

**OR**

(b) Explain constant temperature type hot wire anemometer. **07**

**Q.3** (a) Explain impeller turbine mass flow meter. **07**  
(b) Explain pitot tube with principle and working in detail. **07**

**OR**

**Q.3** (a) Explain orifice plate flow meter in detail. **07**  
(b) Explain principle, working and construction of Rotameter. **07**

**Q.4** (a) Explain principle and working of ring type manometer with neat sketch. **07**  
(b) Explain Piezo electric pressure measurement with neat diagram. **07**

**OR**

**Q.4** (a) Explain pirani gauge for vacuum measurement. **07**

**Q.4** (b) Explain air purge level measurement with neat sketch **07**

**Q.5** (a) Explain ultrasonic level measurement with neat sketch. **07**  
(b) Explain differential pressure method of level measurement for open and closed tank with neat sketch. **07**

**OR**

**Q.5** (a) Explain elastic type pressure measuring elements in short. **07**

(b) Give the difference between thermocouple and RTD. **07**

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