

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(ME) (O.E 2011 Onwards) (Sem.-7,8)

INDUSTRIAL MEASUREMENTS

Subject Code : EI-304/403

Paper ID : [A0883]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A**Q1 Answer briefly :**

- a) Define the term '*Metrology*' and give its significance in modern industries.
- b) Differentiate between primary, secondary and working standards of length.
- c) What is elastic transducer?
- d) Explain how sensitivity can be increased by using inclined tube manometer.
- e) What are thermistors?
- f) State the significance of electric resistance sensors.
- g) What are different types of orifice plates?
- h) What are variable head flow meters?
- i) Define the term "*scales*" and "*balances*".
- j) Enlist various methods for measurement of humidity.

SECTION-B

- Q2 Describe the construction and working of McLeod Gauge for measurement of vacuum.
- Q3 Explain the construction and working of liquid- in- glass thermometers
- Q4 What is ultra sonic flow meter? Describe it's principle of working.
- Q5 Explain how proving ring can be used for force measurement.
- Q6 State the construction and working of rope brake dynamometer.

SECTION-C

- Q7 Describe the working, principle, advantage, disadvantages and application of optical comparator.
- Q8 Describe the construction and working of a bourdon tube. Describe the C- type, spiral type and helical type bourdon gauges with neat diagram.
- Q9 Write a note on the following :
- a) Seismic Pick ups.
 - b) Radiation Pyrometer.