

Q.6 Explain the construction and working of C-type bourden tube.

Q.7 Write short note on any two-

- i) Humidity measurement
- ii) Resistive method of thickness measurement.
- iii) Least count of an instrument.

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5th Sem. / IC, EI

Subject : Process Instrumentation

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note: Very Short Answer type questions. Attempt any 15 parts. (15x2=30)

Q.1 Explain/ Expand/ Define the following:-

- a) Transducer.
- b) Force.
- c) Density.
- d) PH-value.
- e) Instrumentation.
- f) Signal conditioning.
- g) Viscosity.
- h) Displacement.
- i) Humidity.

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- j) Hydro meter.
- k) Frequency.
- l) Time period.
- m) Power.
- n) Strain.
- o) Gauge factor.
- p) Sensitivity.
- q) Resistance.
- r) LVDT.

- vi) Explain the micrometer.
- vii) What is techometer? Explain.
- viii) What is dynamometer?
- ix) Discuss the accelerometer.
- x) What is U-tube manometer?
- xi) Explain the vernier calliper.
- xii) Explain how force can be measured.
- xiii) What is seismic pick up?
- xiv) How torque can be measured.
- xv) Explain how linear speed is measured.

SECTION-B

Note: Short answer type questions. Attempt any ten parts 10x4=40

- Q.2
- i) How the density can be measured?
 - ii) Explain capacity method of thickners.
 - iii) What is watt meter? Why it is used.
 - iv) What is load cell?
 - v) Explain one method to measure viscosity.

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SECTION-C

Note: Long answer type questions. Attempt any three questions. 3x10=30

- Q.3 Explain construction and working of PH-meter.
- Q.4 What is strain gauge? Discuss various types of strain gauge.
- Q.5 What is LVDT? Explain its construction and working in detail.

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