

Total No. of Questions : 6]
P497

SEAT No. :

[Total No. of Pages : 2

TE/Insem/APR - 24
T.E. (Electronics)
Instrumentation Systems
(2012 Pattern) (Semester - II)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates :

- 1) Answer Question 1 or 2, 3 or 4, 5 or 6.*
- 2) Neat diagrams must be drawn wherever necessary.*
- 3) Figures to the right side indicate full marks.*
- 4) Assume suitable data if necessary.*

- Q1)** a) Define Range & Span, Sensitivity and Resolution with suitable example?[6]
b) Classify transducer depending upon their electrical parameter. [4]

OR

- Q2)** a) Draw a Block diagram Instrumentation system & Explain working of each block in detail. [6]
b) Write a short note on standards of measurement. [4]

- Q3)** a) With the help of neat diagram explain constructions & operation of incremental optical encoder. [6]
b) Explain Diaphragm pressure sensor with their types. [4]

OR

- Q4)** a) List the types of strain gauges & explain Gauge factor. [4]
b) How LVDT can be used as secondary transducer to measure pressure, explain it with diagram. [6]

P.T.O.

Q5) a) Write a short note on Differential head type flow meters. [6]

i) Orifice

ii) Venture tube

iii) Flow nozzle

b) What is Flow Rate? Derive Bernoulli equation for it. [4]

OR

Q6) a) Explain working operation of vortex shedding flow meter. [6]

b) Compare Thermistor, RTD and Thermocouple on basis of their characteristics. [4]

