

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

- Q.23 What are the non-contact type temperature measuring instruments? Explain fiber optic thermometer with diagram.
- Q.24 What are the different pressure measuring instrument? Explain any low pressure measuring instrument with diagram.
- Q.25 What are the necessity of data processing in instrumentations? Briefly discuss about the data acquisition system with block diagram.

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5th Sem / Instrumentation & Control

Subject : Process Instrumentation

Time : 3 Hrs.

M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

- Q.1 Which of the following is used to measure very low value of pressure?
- a) Bourdon tube b) Thermistor
c) McLeod Gauge d) Bridgman gauge
- Q.2 An well type manometer is used to measure
- a) Density b) Pressure
c) Flow d) Level
- Q.3 Which of the following is a/an differential pressure flow meter?
- a) Rotameter b) Orifice meter
c) Venturi meter d) Both (b) and (c)

- Q.4 Temperature measurement can be done by using
- a) Thermocouple b) Rotameter
 c) Inductive transducer d) Venturimeter
- Q.5 An RTD has _____ measuring range than a thermocouple.
- a) Low b) High
 c) Same d) None of the above
- Q.6 Which of the following temperature measuring instrument is highly linear?
- a) thermostat b) RTD
 c) Thermistor d) Pyrometer

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

- Q.7 A bridgman gauge is used to measure very low pressure. (T/F)
- Q.8 Define Flow.
- Q.9 What are the units of pressure?
- Q.10 A venture meter is less expensive than an orifice meter. (T/F)

- Q.11 m^3/sec is a unit of _____.
- Q.12 Convert 0 degree Celsius into Kelvin.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

- Q.13 How does an thermocouple work.
- Q.14 What is IR detector? How does it work.
- Q.15 Explain the working of inclined type U-tube manometer.
- Q.16 Explain turbine flow meter with diagram.
- Q.17 How level measurement is done using ultrasonic method? Explain with diagram.
- Q.18 Write all the elements of generalized data acquisition system.
- Q.19 Write any four differences between RTD and thermistor.
- Q.20 What are the diadvantages of venture meter over orifice? Write any four.
- Q.21 How does a inductive level sensor work?
- Q.22 What are the applications of Pirani gauge?