No. of Printed Pages : 4
Roll No. .....

221554

5th Sem.
Branch : 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 device is used for Temperature measurement.

a) RTD b) Thermistor
c) Thermocouple d) All of these

Q.2 Thermistor is a type of

a) Negative Temperature coefficient of resistance
b) Positive Temperature coefficient of resistance
c) Both A & B
d) None of these

Q.3 Which of the following gauge is used for high pressure measurement.

a) Pirani gauge b) Mc Leod gauge
c) Bridgman gauge d) None of these

Q.4 Ultra sonic flow measurement based on the principle of.

a) See-back effect
b) Doppler effect
c) Electro-magnetic based
d) None of these

Q.5 Level measurement by

a) Resistive transducer b) Capacitive transducer

c) Inductive transducer d) All of these

Q.6 What is stand alone data acquisition systems often called.

a) Data Blogger b) Data Logger

c) Data Vlogger d) Digital Blogger

Section-B

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

Q.7 Manometer is used measurement of _____.

Q.8 Thermocouple principle based on _____.

Q.9 Rota-meter is used for measurement of.

Q.10 Unit of pressure_____.

Q.11 Capacitive transducer is used for level measurement_____(Yes/No)

Q.12 DAC stands for _____.

Section-C

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

Q.13 Explain the working principle and construction of RTD and draw its relation ship between resistance and temperature for (Platinum, copper and nickel)

Q.14 Define the different unit of temperature and also write the relationship between units.

Q.15 Define the absolute pressure, gauge pressure, vacuum pressure and differential pressure.

Q.16 Explain the Pirani gauge and Mc Leod gauge for pressure measurement.

Q.17 Explain the working of the venturimeter and how the flow rate calculates.

Q.18 Explain the ultrasonic flow measurement.

Q.19 Explain the Capacitive transducer method for level measurement.

Q.20 Explain the Ultrasonic method for level measurement.

Q.21 Discuss the block diagram of DAC.

Q.22 Write the Comparison between DAS and Data Logger.

Section-D

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

Q.23 Explain the working Principle and construction of thermocouple, write the advantage disadvantage and their application, and also define the Base metal and rare metal, write the naming of type (K, E, J, T).

Q.24 Explain the working principle of Electro-Magnetic flow meter an driver the flow rate expression.

Q25 Discuss the following measuring instrument.

a) Bourdon tube

b) Bellow

c) Well type manometer

d) Inclined type manometer