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Roll No. .....

5 Sem./ Elect, Eltx
Subject : Instumentation

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. (10x1=10)

Q.1 Which of the following is Passive Transducer
a) LVDT
b) Piezo Electric Transducer
c) Thermocouple
d) Photo voltaic cell

Q.2 Pyrometer is used to measure
a) Temperature b) Displacement
c) Level of liquid d) Pressure

Q.3 Pneumatic load cells are suitable for measuring
a) Very low pressure
b) Very high pressure
c) Intermediate range of pressure
d) All of the above

Q.4 Which of the following is an inverse transducer?
a) LVDT b) Load cells
c) Bourdon Tube d) Piezoelectric Tansducer

Q.5 Which of the following can be measured using Tachometer?
a) Vibration b) Acceleration
c) Angular speed d) Linear speed

Q.6 Which of the following represent piezoelectric material?
a) Rochelle Salt b) Quartz
c) Bernilite d) All of the above

Q.7 Which of the following can not be measured using piezoelectric Transducer
a) Acceleration b) Strain
c) Static displacement d) Force

Q.8 _____describes current flow between two junctions formed by two different metals?
a) Peltier effect b) Thomson effect
c) Seebeck effect d) None of the above

Q.9 Which of the following device is used for measuring relative humidity
a) Capacitive Pressure Transducer
b) Hygrometer
c) Capacitive strain transducer
d) Capacitive moisture transducer

Q.10 Capacitive Transducer can be used by _____.
a) Measuring change in distance between plates
b) Measuring change in area of plates
c) Change in Dielectrical material
d) All of the above

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 Define Secondary Transducer.

Q.12 What is Electrical strain Gauge.

Q.13 Define Gauge Factor.

Q.14 What is Thermocouple.

Q.15 Name any one primary transducer used for measurement of pressure?

Q.16 Define relative Humidity?

Q.17 What is inverse transducer?

Q.18 Name any two Segmental display devices?

Q.19 Explain V.R.I.T.?

Q.20 Mention two advantages of Electrical Transducer?

SECTION-C

Note: Short answer type Question. Attempt any twelve questions out of fifteen Questions. (12x5=60)

Q.21 Draw and explain piezoelectric Transducer?

Q.22 Explain the working of LCD. Give its advantage and disadvantages?

Q.23 Explain the working of resistive transducer?

Q.24 What is the difference between Active and passive Transducer?

Q25 Explain the working of LVDT?

Q.26 Explain the use of Electrical strain Gauges?

Q.27 Explain the measurement of Torque by dynamometer method?

Q.28 Explain Pneumatic Load Cell?

Q.29 Explain Bourdon pressure gauges?

Q.30 Explain the measurement of pressure using Bellows and LVDT?

Q.31 Explain the working of ultrasonic flow mete?

Q.32 Explain the measurement of temperature using Bimetalic thermometer?

Q.33 Mention any five applications of thermistors?

Q.34 Explain any one method of measurement of level?

Q.35 Explain the measurement of pH value?

SECTION-D

Note: Long answer questions. Attempt any two question out of three Questions. (2x10=20)

Q.36 Mention different methods of force measurement? Explain any one method in detail. What are its advantages and disadvantages.

Q.37 Define Pyrometry. Explain Total radiation Pyrometers with the help of neat diagram?

Q.38 Explain various methods of vibration measurement?