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5th Sem / Elect / Eltx Engg
Subject:- Instrumentation

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 Which of the following made of semiconductor material (CO1)

a) LED b) LCD
c) Both LED and LCD d) None of the above

Q.2 In a measurement, what is the term used to specify the closeness of two or more measurements? (CO1)

a) Accuracy b) Fidelity
c) Threshold d) Precision

Q.3 Which transducer is known as 'self-generating transducer'? (CO2)

a) Analog transducer b) Digital transducer
c) Active transducer d) Passive transducer

Q.4 Which of the following is an analog transducer?(CO2)

a) Encoders b) Strain Gauge
c) Digital Tachometer d) Limit switches

Q.5 Which of the following represents the application of inductive transducers? (CO3)

a) Displacement measurement
b) Thickness measurement
c) Both Displacement & Thickness measurement
d) None of the above

Q.6 Load cells are used for measuring_____ (CO4)

a) Large weights only
b) Small weights only
c) Weights in moving in high speed
d) Slowly moving only

Q.7 LVDT stands for_____ (CO3)

a) Linear Virtual Double Transformer
b) Linear Virtual Differential Transducer
c) Linear Variable Differential Transducer
d) Linear Variable Differential Transformer

Q.8 The lower temperature junction in thermocouple is maintained at_____ (CO6)

a) 0 K b) 273 K
c) -273 K d) -327 K

Q.9 LVDT cannot measure (CO3)

a) Weight b) Pressure
c) acceleration d) temperature

Q.10 Which of the following have negative temperature coefficient? (CO7)

a) Strain Gauge b) Thermistor
c) RTD d) Thermocouple

SECTION-B

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

Q.11 Write full form of LED. (CO1)

Q.12 Define Transducer. (CO2)

Q.13 Write any two applications of piezoelectric transducers. (CO2)

Q.14 Define Strain. (CO3)

Q.15 Define Gauge factor. (CO3)

Q.16 Define force. (CO4)

Q.17 Define absolute pressure. (CO5)

Q.18 Define humidity. (CO8)

Q.19 What is thermocouple? (CO7)

Q.20 What is Temperature recorder? (CO7)

SECTION-C

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

Q.21 What is measurement? Explain basic measurement system. (CO1)

Q.22 Write advantages and disadvantages of LCD. (CO1)

Q.23 Compare primary and secondary transducers. (CO2)

Q.24 What are various uses of capacitive transducers? (CO2)

Q.25 Write a short note on "Strain gauges and its types". (CO3)

Q.26 What are different uses of electrical strain gauges.

(CO3)

Q.27 What are different methods of measurement of speed? (CO4)

Q.28 Write a short note on "Load cell". (CO4)

Q.29 Explain the working of Bourdon tubes. Write it's any two advantages.

Q.30 Write a short note on "Electrical pressure picks up". (CO5)

Q.31 Explain the working of ultrasonic flow meter. (CO6)

Q.32 Write advantages and disadvantages of electromagnetic flow meter. (CO6)

Q.33 Explain various methods to measure pH level.(CO8)

Q.34 Explain the working of thermoelectric thermometer. (CO7)

Q.35 What is thermistor? Write its various applications. (CO7)

SECTION-D

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

Q.36 Explain construction and working principle of Electromagnetic transducers. (CO2)

Q.37 Explain "LVDT". Write its advantages and disadvantages. (CO3)

Q.38 What is Torque? Explain various methods of measurement of torque. (CO4)

(**Note:** Course outcome/CO is for office use only)