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221516

1st Sem / Instrumentation & Control Engg.

Subject : Fundamental of Instrumentation Engineering

Time : 3 Hrs. M.M. : 60

SECTION-A

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

Q.1 The Function of transducer is

a) Amplify the input signal

b) Convert one form of energy into another form of energy

c) Regulate the signal for a suitable control application

d) None

Q.2 The ratio of change in output to change in input

a) error b) Range

c) threshold d) Sensitivity

Q.3 Which of the following is active transducer?

a) RTD b) LVDT

c) Strain gauge d) Thermocouple

Q.4 LED stands for

a) Light emit diode b) Light emitting diode

c) Light emitted diode d) None

Q.5 Gross error in the instrument occurs due to

a) Human b) environmental

c) Systemic d) None

Q.6 Which of the following is temperature sensor?

a) LVDT b) Bellows

c) thermocouple d) None

SECTION-B

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

Q.7 Write 2 name of temperature sensor.

Q.8 A null type of instrument is more accurate as compare to the deflection type (Yes/No)

Q.9 Write 2 desirable quantity in measurement system

Q.10 Resolution is the undesirable quantity (Yes/No)

Q.11 What is Linearity.

Q.12 What is transducer.

SECTION-C

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

Q.13 Explain the difference between sensor and transducer.

Q.14 What is the instrument and measurement system.

Q.15 What is Calibration.

Q.16 What is the difference between and direct and indirect measurement.

Q.17 What is the primary sensing element?

Q.18 What is random error.

Q.19 Explain Dot matrices.

Q.20 What is loading effect.

Q.21 Explain controlling torque.

Q.22 Write the difference between angle and digital mode.

SECTION-D

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

Q.23 Explain the different types of source of error.

Q.24 Explain the three statics and dynamic characteristics of instrument.

Q.25 Explain the difference between absolute and secondary instrument.