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221532

3rd Sem. / Instrumentation & Control

Subject : Sensors and Transducers

Time : 3 Hrs. M.M. : 60

SECTION-A

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

Q.1 Change in output of sensor with change in input is

a) Sensitivity
b) Slew Rate
c) Threshold
d) None of the mentioned

Q.2 Resistive transducer are ____

a) Primary transducers
b) Secondary transducers
c) Either Primary or Secondary
d) None of the mentioned

Q.3 Inductive transducer measures the variation in _____

a) Reluctance b) Rsistance
c) Capacitance d) Self-Inductance

SECTION-D

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

Q.23 Explain working and principle of LVDT.

Q.24 What is resistive transducer and also explain any type of resistive transducer.

Q.25 Explain working and principle of seismic pick up in transducer.

Q.4 How the capacitance is measured in capacitive transducers?

a) Ammeter b) Voltmeter

c) Bridge Circuit d) Thermister

Q.5 Piezo-Electric transducer is used for measuring

a) Non-Electrical quantities

b) Electrical quantities

c) Chemical quantities

d) Any quantity

Q.6 Based upon what parameters sensor will be chosen _____

a) Environmental factors

b) Economic factor

c) Static Characteristics

d) All of above

SECTION-B

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

Q.7 Define transducer.

Q.8 Write the full form of RTD.

Q.9 What is inductor?

Q.10 Define capacitive transducer.

Q.11 What is shaft encoder?

Q.12 Accuracy

SECTION-C

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

Q.13 Write atleast two advantages and two disadvantages of piezo-electric transducer.

Q.14 What is electromagnetic pick up?

Q.15 Write a short note on transducer element.

Q.16 Explain how a capacitive transducer works.

Q.17 What are the silent features of thermistors? Give its application also.

Q.18 Explain working of inductive transducer.

Q.19 How transducer are classified?

Q.20 What is digital transducer?

Q.21 Discuss the different applications of linear variable differential transducer.

Q.22 Explain working of Piezo-electrical transducer.