Q.31 Mention various types of display devices used in instrumentation system. (CO1)

Q.32 Differentiate between Active transducer & Passive transducer. (CO2)

Q.33 List the advantages and disadvantages of LVDT. (CO3)

Q.34 What are the salient features of thermistors? Give its applications. (CO4)

Q.35 Differentiate between Analog transducer & digital transducer. (CO2)

SECTION-D

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

Q.36 Mention different blocks of a digital data acquisition system. Briefly discuss about each of them. (CO8)

Q.37 What are the different ways according to which transducers can be classified? List some factors that determine the choice of transducer. (CO2)

Q.38 Write short note on (CO4)

a) Pressure sensor

b) Pyrometry

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

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202434

3rd Sem / Branch : Mechtronics

Subject:- Electronic Instrumentation

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 Function of transducer is to convert (Co2)

a) Electrical signal into non electrical quantity

b) Non electrical quantity into electrical signal

c) Electrical signal into mechanical quantity

d) All of these

Q.2 Strain gauge is a (CO2)

a) Inductive transducer

b) Resistive transducer

c) Capacitive transducer

d) Mechanical transducer

Q.3 Commonly used elements for wire strain gauges are (CO2)

a) Nickel and copper

b) Nickel and gold

c) Gold and brass

d) Silver and aluminium

Q.4 Which of the following quantity can be directly measured by LVDT? (CO3)

a) Displacement b) Force

c) Pressure d) Weight

Q.5 Thermistors have_____ (CO4)
a) Positive temperature coefficient
b) Negative temperature coefficient
c) Zero temperature coefficient
d) Infinite temperature coefficient

Q.6 Pressure is the (CO4)
a) Force per unit area
b) Mass per unit area
c) Force per unit volume
d) Mass per unit volume

Q.7 Piezo - electric transducers work when we apply_____to it (CO3)
a) Mechanical force b) Vibrations
c) Illuminations d) Heat

Q.8 Capacitive transducer is used for? (CO2)
a) Static measurement
b) Dynamic measurement
c) Transient measurement
d) Both static and dynamic

Q.9 A pH value less than 7.0 means that the solution is: (CO5)
a) Basic b) Acidic
c) Alkaline d) Caustic

Q.10 Device used for measuring torque in rotating parts in machines. (CO4)
a) Accelerometer b) Dynamometer
c) Tachometer d) None of the above

SECTION-B

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

Q.11 RTD stands for_____ (CO5)

Q.12 Define active transducer._____ (CO2)

Q.13 Bourdon tube are made up of_____ (CO4)

Q.14 Define hydro static pressure? (CO4)

Q.15 Define Hygrometer? (CO1)

Q.16 Electromagnetic flow meter is independent of liquid density? (True/False) (CO7)

Q.17 PH value varies from_____to_____ (CO6)

Q.18 Thermocouple is used for measuring_____ (CO4)

Q.19 What is Pneumatic Load cell (CO2)

Q.20 What is a stroboscope? (CO7)

SECTION-C

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

Q.21 Explain two methods of displacement measurement. (CO4)

Q.22 Write short note on Display devices. (CO5)

Q.23 What do you mean by signal conditioning? What is its need? (CO1)

Q.24 Explain Platinum resistance thermometer. (CO5)

Q.25 Discuss different types of piezoelectric transducers? (CO2)

Q.26 What is the importance of measurement? (CO1)

Q.27 Explain ultrasonic flow meter? (CO4)

Q.28 What are various types of hygrometer? Discuss any of them in detail. (CO5)

Q.29 Explain stain gauge torque meter. (CO3)

Q.30 What are the different methods of measuring pressure. (CO4)