Q.27 What are the limitations electromagnetic flow meter. (CO4)

Q.28 What are the factors on which the pH value depends? (CO5)

Q.29 Write a short note on measurement of torque. (CO3)

Q.30 What are the various configurations used in DAS? (CO8)

Q.31 What do you mean by signal conditioning? What is its need? (CO1)

Q.32 What are the different ways according to which transducer can be classified? (CO2)

Q.33 What are the different types of Resistance transducers ? Explain (CO2)

Q.34 Explain U-tube manometer with the help of a labeled diagram. (CO4)

Q.35 What are the methods used for level measurement? (CO5)

SECTION-D

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

Q.36 Explain the operating principle of LVDT. List the advantages & disadvantages of LVDT and different applications of LVDT. (CO3)

Q.37 Explain the working of load cell. Write its advantages and disadvantages. (CO4)

Q.38 Write short note on:

i) Thermocouple ii) X-Y Recorder

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

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Roll No. .....

3rd Sem / Mechtronics

Subject:- Electronics Instrumentation

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 What is a helipot? (CO1)

a) Inductive element b) Capacitive element

c) helipad d) resistive element

Q.2 The transducer used for the measurements is/are (CO2)

a) Resistance temperature detectors

b) Thermistors

c) Ultrasonic

d) All of these

Q.3 The_____ of a strain gauge varies with applied strain. (CO3)

a) Resistance b) Capacitance

c) inductance d) flux

Q.4 Which of the following is a digital transducer?(CO3)

a) Strain gauge b) encoder

c) Thermistor d) LVDT

Q.5 Most suitable material for a thermocouple is (CO5)

a) brass b) gold
c) platinum d) silver

Q.6 Full form of LVDT is (CO4)
a) Linear Variable Differential Transducer
b) Line Voltage Differential Transformer
c) Linear Variable Differential Transformer
d) Line Voltage Differential Transducer

Q.7 Which of the following represent active transducer? (CO2)
a) Strain gauge b) Thermistor
c) LVDT d) Thermocouple

Q.8 Potentiometer transducers are used for the measurement of (CO3)
a) Pressure b) Displacement
c) Humidity d) Both (a) and (b)

Q.9 The instruments used for the measurement of pressure is / are _____ (CO4)
a) Bellows
b) Diaphragms
c) Fiber optic pressure sensors
d) All of these

Q.10 Instrument used for the measurement of Humidity (CO5)
a) Hygrometer b) Gyroscope
c) Sesimoscope d) Hydrometer

SECTION-B

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

Q.11 LVDT is a passive inductive transducer. (True/False) (CO4)

Q.12 Define Strain. (CO2)

Q.13 List two types of recorders? (CO5)

Q.14 Bellows are used to measure_____. (CO4)

Q.15 Expand LDR_____. (CO1)

Q.16 Electromagnetic flow meter is independent of liquid density? (True/False) (CO1)

Q.17 PH meter is used to measure_____. (CO4)

Q.18 Thermometer are used for measuring _____.(CO4)

Q.19 What is a tachometer? (CO3)

Q.20 List two Piezo electric materials. (CO6)

SECTION-C

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

Q.21 Explain the principle and working of Piezoelectric Transducers. (CO4)

Q.22 Compare LED and Seven segment display. (CO5)

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

Q.24 Write short note on spiral type bimetallic thermometer. (CO5)

Q.25 What is strain gauge? Define gauge factor and how it is related with poisson's ratio. (CO2)

Q.26 List some factors that determine the choice of transducer. (CO2)