Q.31 What is potentiometer and give two applications.

Q.32 Explain working of Thermistors and give two applications.

Q.33 Explain ADC

Q.34 Describe L.V.D.T.

Q.35 Write a short note on V to I converter

SECTION-D

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

Q.36 Write note on any two:-

(I) Load cell

(ii) Carbon microphones

(iii) Thermistor

Q.37 Explain the working of synchro Transmitter and Receiver also write one application.

Q.38 Explain Construction and working of Ultrasonic transducer in detail.

No. of Printed Pages : 4
Roll No. .....

4th Sem ./ Instrumentation and Control , El
Subject:- Transducers and Signal Conditioning

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 The measure unit of Capacitance is

a) Henry b) Coulomb

c) Farad d) None of above

Q.2 In A.C. signal conditions the normal range of carrier frequency is._____

a) 50 Hz. to 20 KHz b) 100 KHz. to 200 KHz

c) 50 Hz. to 100 KHz d) None of these

Q.3 Self-generating type transducer are____transducer.

a) Active b) Passive

c) Inverse d) Secondary

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

a) Strain Gauge b) Encoder

c) Thermistor d) LVDT

Q.5 Hot wire Anemometer is used to measure flow rate of thermely _____material.

a) Conductive b) Non-Conductive
c) Both A & B d) None of these

Q.6 Piezo electric transducer is_____
a) Passive transducer b) Active transducer
c) Inverse transducer d) Both B & C

Q.7 An inverse transducer converts_____
a) Electrical energy to any other form of energy
b) Electrical energy to Nonelectrical energy
c) Mechanical displacement in to electrical energy
d) None of these

Q.8 Which of the following transducer is of resistive type
a) Stain gauge b) LDR
c) RTD d) All of these

Q.9 Resolution of a transducer depends on
a) Material of wire b) Length of wire
c) Diameter of wire d) Excitation voltage

Q.10 Sesmic Pickup is used to measure_____signal
a) Volt b) Current
c) Vibration d) Flow

SECTION-B

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

Q.11 Electromegnatic pickup is a resistive type of transducer. (True/False)

Q.12 Define Linearity.

Q.13 Microphone convert _____energy into _____ energy.

Q.14 Define Accuracy.

Q.15 Define Gauge Factor.

Q.16 Thermocouple is based on____effect.

Q.17 What Filtering does in signal conditioning.

Q.18 Name one Digital transducer.

Q.19 Explain R.V.D.T.

Q.20 State Hall's Effect.

SECTION-C

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

Q.21 Write a short note on impedance matching.

Q.22 Explain Hot Wire Anemometer with diagram.

Q.23 Explain Hall's Effect Transducer.

Q.24 Write a short note on Techo generator.

Q.25 Explain working of hot wire anemometer.

Q.26 Define pickup and explain the working of electromagnetic pickup.

Q.27 Explain working and construction of R.T.D

Q.28 Explain two application of capacitive transducer.

Q.29 Describe working of carbon microphone

Q.30 Give five selection criteria for transducer