Q.27 Define Pressure. How Pressure using Barometer can be measured. (CO2)

Q.28 Explain construction and working of Bourdon Tubes. (CO3)

Q.29 What is Flow meter. Explain the working of ultrasonic flow meter. (CO3)

Q.30 What are thermistors? Give their construction and applications (CO4)

Q.31 Define Pyrometer. Explain working Principal and its types. (CO4)

Q.32 Define the following term (CO5)

a) Absolute Humidity

b) Relative Humidity

Q.33 What are the applications of LCD? (CO6)

Q.34 Define pH Scale and its Range. How it is measured. (CO5)

Q.35 Explain X Y recorder with block diagram (CO6)

SECTION-D

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

Q.36 Explain the block diagram of Basic Measuring System. (CO1)

Q.37 Discuss the working of LCD in details with Block diagram (CO6)

Q.38 a) Explain the working of LVDT with its Block diagram. (CO2)

b) Define Load cell. Explain the working of Hydraulic Load cell. (Co3)

Roll No. .....

3rd Sem / Mechatronics

Subject:- Electronic Instrumentation

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 Measurement is the process which involves _____with some known quantity of the same kind. (CO1)

a) Balancing b) Comparison

c) Data Acquisition d) Sampling

Q.2 Microphone is used at _____ and loud speakers used at _____. (CO1)

a) Transmitting end, receiving end

b) Receiving end, transmitting end

c) Transmitting end, transmitting end

d) Receiving end, receiving end

Q.3 LVDT is (CO2)

a) Analog Transducer b) Digital Transducer

Q.4 Force is defined as (CO3)

a) m*a b) v*t

c) $\lambda * f$ d) m*v

Q.5 Which of the following conversion take place in bourdon tubes ? (CO3)

a) Pressure to displacement
b) Pressure to voltage
c) Pressure to strain
d) Pressure to force

Q.6 Range of Thermocouple lies from (CO4)

a) -200° C to 1800° C b) 200° C to 600° C
c) -500° C to 700° C d) 200° C to 1800° C

Q.7 Which of the following can be used as display device? (CO6)

a) Thermocouple b) LED
c) Barometer d) Tachometer

Q.8 Units for Absolute Humidity is _____. (CO5)

a) % b) grams / m^3
c) % by volume d) PPMV

Q.9 What is a data acquisition system ? (CO6)

a) System used for data processing, conversion and transmission.
b) Accepts data as an input
c) Removes noise
d) Boots the signal

Q.10 Flow meter which cannot measure bidirectional flow is : (CO3)

a) Ultrasonic Flowmeter
b) Turbine Flowmeter
c) Electromagnetic Flowmeter
d) Coriolis Flowmeter

SECTION-B

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

Q.11 Define Transducer. (CO1)
Q.12 LED Stands for (CO6)
Q.13 Mention one Disadvantage of LED (CO1)
Q.14 Define Force (CO3)
Q.15 What is Doppler Effect. (CO3)
Q.16 Define Gauge Factor. (CO2)
Q.17 Define Thermocouple (CO4)
Q.18 What is DAS. (CO6)
Q.19 What is pH value of Neutral Solution? (CO5)
Q.20 Write unit of Pressure. (CO3)

SECTION-C

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

Q.21 What is the Importance of Measurement? (CO1)
Q.22 Define Transducer. How Resistive Transducer works. (CO1)
Q.23 What are the advantages and disadvantages of Inductive Transducer. (CO1)
Q.24 What is Piezoelectric Effect. How Piezoelectric Transducer works. (CO1)
Q.25 How Inductive Strain Gauge can measure displacement. Explain construction and working. (CO2)
Q.26 What is Electrical Tachometer. Explain the working of AC tachometer (CO3)