Q.27 What are load cells. How Pneumatic Load cell works. (CO3)

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

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

Q.30 Explain construction and working of thermocouple. (CO4)

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

Q.32 Define the following term (CO5)

a) Absolute Humidity b) Specific Humidity

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

Q.34 Define Vibration. 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 Define LVDT. Explain its construction and working with its diagram. (CO2)

Q.38 What is Data Acquisition System. Explain with its Block Diagram. (CO6)

Roll No. .....

3rd Sem / Mechatronics

Subject:- Electronics Instrumentations

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 Last Stage of Measurement system is done by (CO1)

a) Display Devices
b) Primary Sensing Element
c) Variable Conversion Element
d) Transducer

Q.2 Which of the following converts of physical parameter in to Electrical signal (CO1)

a) Transformer b) Speaker
c) Transducer d) Crystal

Q.3 The transducer employed for measurement of angular displacement is (CO3)

a) LVDT
b) Thermocouple
c) Thermistor
d) Circular Potentiometer

Q.4 Torque is defined as (CO3)

a) F*d b) v*t
c) ¦ *¦ d) m*v

Q.5 Which of the following is detected using manometer devices? (CO3)

a) Pressure difference between manometric and measuring liquid
b) pH difference between between manometric and measuring liquid
c) Density difference between manometric and measuring liquid
d) None of the mentioned

Q.6 Range of RTD lies from

a) 0^{o}C to 500^{o} C b) -260^{o}C to 860^{o} C
c) 100^{o}C to 700^{o} C d) -50o C to 600^{o}C

Q.7 Flowmeter which cannot measure bidirectional flow is : (CO3)

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

Q.8 Which of the following can be used as display device? (CO6)

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

Q.9 Units for Specific Humidity is_____ (CO5)

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

Q.10 A typical data acquisition system consists of_____ (CO6)

a) op amps b) Sensors
c) Rectifiers d) Transistors

SECTION-B

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

Q.11 Define Measurement. (CO1)
Q.12 What is Piezoelectric effect. (CO1)
Q.13 Mention one advantage of LCD (CO1)
Q.14 Define Torque. (CO3)
Q.15 Barometer is use to measure_____ (CO3)
Q.16 What is DAS? (CO6)
Q.17 Define Thermistors (CO4)
Q.18 Define hygrometer (CO5)
Q.19 LVDT Stands for_____ (CO2)
Q.20 What is Doppler Effect. (CO3)

SECTION-C

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

Q.21 What are display devices. Explain any one in brief. (CO1)
Q.22 Define Transducer. How Inductive Transducer works. (CO1)
Q.23 What are the advantages and disadvantages of Capacitive Transducer. (CO1)
Q.24 What is piezoelectric Effect. How Piezoelectric Transducer works. (CO1)
Q.25 How Resistive Strain Gauge can measure displacement. Explain construction and working. (CO2)
Q.26 What is Electrical Tachometer. Explain the working of DC tachometer. (CO3)