

- Q.26 Name various methods of Force measurement. Explain any one method with help of diagram?
- Q.27 Explain the measurement of Torque by dynamometer method.
- Q.28 Explain Hydraulic Load cell?
- Q.29 Explain the working principle of Bonded wire Strain Gauges?
- Q.30 Explain the process of measurement of pressure by Pirani Gauges?
- Q.31 Explain the working Principle of Electromagnetic flow meter with the help of neat diagram?
- Q.32 Explain the measurement of temperature using any one type of pyrometer?
- Q.33 Mention any five uses of pressure cells?
- Q.34 Explain any one method of measurement of vibration?
- Q.35 Mention any five applications of PH measurement.

Section-D

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

- Q.36 Draw and Explain various type of Hygrometers.
- Q.37 Explain Load measurement by using Elastic Transducer and electrical strain Gauges?
- Q.38 Explain Digital methods of speed measurement?

No. of Printed Pages : 4

Roll No.

120946

4th Sem.

**Branch: Elect., Power Station Engg., Elect & Eltx. Engg.
Sub : Instrumentation**

Time : 3 Hrs.

MM : 100

SECTION-A

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

- Q.1 Which of the following is Passive Transducer.
- Piezoelectric Transducer
 - Thermocouple
 - Photo Voltaic cell
 - LVDT
- Q.2 RTD is used to measure
- Temperature
 - Displacement
 - Level of liquid
 - Pressure
- Q.3 Which of the following device can be used for force measurement?
- Beams
 - Bellows
 - Capsule
 - Bourdon Tube
- Q.4 Which of the following statement is true for diaphragms?
- Used for measuring Large forces
 - Used for measuring Small forces
 - Used for measuring dynamic forces
 - None of the above

- Q.5 The transducer that converts the input signal into the output signal which is a discrete function of time is known as _____ transducer?
 a) Active b) Analog
 c) Digital d) Pulse
- Q.6 An inverse transducer is a device which converts?
 a) Electrical quantity into an non Electrical quantity
 b) Electrical quantity into mechanical quantity.
 c) Electrical quantity into thermal energy
 d) Electrical quantity into light energy
- Q.7 Which of the following is used to measure Torque in rotating parts in machines.
 a) Accelerometer b) Dynamometer
 c) Tachometer d) None of the above
- Q.8 Certain type of material generates an electrostatic charge or voltage when mechanical force is applied across them. Such materials are called?
 a) Piezo-electric b) Photo-electric
 c) Thermo-electric d) Photo-resistive
- Q.9 In a LVDT, the two secondary voltages
 a) Are independent of core position
 b) Vary unequally depending on the core position
 c) Vary equally depending on the core position
 d) Are always in phase quadrature.
- Q.10 LVDT is an _____ transducer?
 a) Capacitive b) Inductive
 c) Resistive d) Eddy current

Section-B

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

- Q.11 Define Digital Transducer?
- Q.12 Define Gauge Factor?
- Q.13 Name any one Pressure measuring Primary Transducer?
- Q.14 What is RTD?
- Q.15 What is Thermocouple?
- Q.16 Define Absolute Humidity?
- Q.17 Mention two applications of Thermistor?
- Q.18 Mention two advantages of LED?
- Q.19 Name any two methods of Level measurement?
- Q.20 What is resistance strain Gauge?

Section-C

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

- Q.21 Draw the block diagram and explain DC signal conditioning system.
- Q.22 Explain the working of seven segmental Display.
- Q.23 Draw and explain the working of LVDT?
- Q.24 Explain the working Principle of Capacitive Transducer?
- Q.25 Explain the working of Piezoelectric Transducer?