

- Q.26 What is principle of resistance thermometer?
 Q.27 Write a short note on "pH measurement".
 Q.28 Write a short note on "strain gauge bridges".
 Q.29 Explain the different method used for measurement of the liquid level?
 Q.30 How load is measured using electric strain gauges?
 Q.31 What is bimetallic thermometer ? Where it is used?
 Q.32 What are the applications of thermistor?
 Q.33 What are methods for measurement of vibrations?
 Q.34 Describe basic measuring system?
 Q.35 What are different methods of Level measurement ? Explain any one method in detail.

SECTION-D

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

- Q.36 What are different methods of force measurement? Explain these methods.
 Q.37 Draw and explain ultrasonic flow meter for the measurement of flow?
 Q.38 Describe the principle and working of ultra-sonic flow meter?

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4th Sem / Elect, Power Station Engg., Elect. & Eltx. Engg.
Subject:- Instrumentation

Time : 3Hrs.

M.M. : 100

SECTION-A

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

- Q.1 In an electric vehicle, a _____ displays speed of motor.
 a) tachometer b) barometer
 c) Magnetometer d) None of these
 Q.2 Piezoelectricity means _____
 a) electric polarization b) electric dielectric
 c) pressure electricity d) polar dielectric
 Q.3 On which of the given principles, strain gauge is based on.
 a) change in pressure with change in volume
 b) change in resistance with change in length
 c) change in pressure with change in length
 d) None of the above
 Q.4 Which of the following can measure the pressure directly?
 a) 0-7 b) 0-10
 c) 0-14 d) 0-21

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- .5 The property of a material producing electric signal when mechanical stress is applied is known as _____.
a) Filtering b) piezoelectric effect
c) pressure electricity d) none of the above
- Q.6 The advantages of LVDT are _____
a) linearity b) infinite resolution
c) low hysteresis d) all of the above
- Q.7 A hygrometer is an instrument used to measure _____.
a) speed b) pressure
c) relative humidity d) None of the above
- Q.8 Which of the following devices is used to measure relatively high temperature, such as encountered in furnaces?
a) bolometer b) pyrometer
c) ammeter d) fluxmeter
- Q.9 The electrodes used in pH measurement have which of the following internal resistances?
a) very high resistance b) moderate resistance
c) very low resistance d) no resistance
- Q.10 Which of the following substances exhibits piezo electric effect?
a) Tourmaline b) Quartz
c) Rochelle Salt d) All of the above

SECTION-B

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

- Q.11 Name any two methods for measurement of force.
- Q.12 Bourdon tube is used for _____.
- Q.13 What is the use of dynamometer?
- Q.14 Write application of temperature recorder.
- Q.15 Define pressure cells.
- Q.16 Give formula for strain.
- Q.17 What is capacitive transducer?
- Q.18 What is magnetic flow meter?
- Q.19 Define diaphragms.
- Q.20 Define absolute humidity?

SECTION-C

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

- Q.21 What are different methods of measurements?
- Q.22 What are the disadvantages of LVDT?
- Q.23 What are the advantages and disadvantages of LCD?
- Q.24 Explain the working of wire wound potentiometer.
- Q.25 What are advantages and disadvantages of Load cells?