

## IMPORTANT QUESTIONS

1

- . a) What is piezoresistive effect?
  - b) Why platinum is considered most suitable material for RTDs?
  - c) Differentiate primary and secondary transducers.
  - d) What is decade counter?
  - e) What are the uses of a waveform analyzer.
2. a) Why FFT spectrum analysis is limited to low frequency applications?
  - b) What is signal generator?
  - c) Why direct coupled amplifier dc voltmeter commonly used?
  - d) What is meant by retrace time?
  - e) What is graticule?
3. a) Why are strain gauges called the piezoresistive strain gauges?
  - b) Name materials for making a thermocouple to work at  $400^{\circ}\text{C}$  to  $1,400^{\circ}\text{C}$ .
  - c) Differentiate analog and digital transducers.
  - d) What is frequency counter?
  - e) Why RF spectrum analyzers are more important than AF ones?
4. a) Why are buffer amplifiers used in signal generators?
  - b) What is function generator?
  - c) What is the utility of Time base circuit?
  - d) Enlist the applications of CRO.
  - e) What are various focusing techniques?
5. a) Why is delay line used in vertical section of an oscilloscope.
  - b) What is Secondary Emission? Where aquadag coating is used and why?
  - c) What is a lissajous pattern?
  - d) Differentiate between active and passive transducers.
  - e) What is Gauge Factor?

**Q.6** What is the difference between dual trace and dual beam oscilloscope? How frequency can be measured by oscilloscope.

**Q.7** Describe the principle of working and block diagram of Digital storage oscilloscope.

**Q.8** Draw and explain the block diagram of a sampling oscilloscope.

**Q.9** Explain the features of high frequency CRO. What are the various types of probes used for CRO.

**Q.10** Explain different types of Analog storage oscilloscope.

**Q.11** Describe the methods of measurement of power at radio frequencies.

**Q.12** Describe the circuit and working of a Q meter. Also describe its applications.

**Q.13** Explain the types of DC and AC voltmeter.

**Q.14** Draw and explain balanced bridge transistorized voltmeter.

**Q.15** Describe true RMS reading AC voltmeter in detail.

**Q.16** What is Harmonic Distortion? Discuss Harmonic distortion Analyzer based on Fundamental Suppression Type? Draw & describe block Diagram of Heterodyne Wave Analyzer.

**Q.17** What is Universal Counter? Explain its operation with suitable diagram for

- A. Time Period
- B. Frequency
- C. Time interval Measurement?

Explain working of Decade Counter Assembly.

**Q.18** Discuss block diagram and working of spectrum analyzer

**Q.19** Discuss Digital Frequency Meter with block Diagram.

**Q.20** Describe the term total harmonic distortion. Describe the functioning of Harmonic Distortion meter.

**Q.21** What is Seeback Effect? Explain a transducer based on this effect? Explain working of LVDT.

**Q.22** Draw and describe block diagram of DC and Ac signal conditioning system. Draw and describe block diagram of Data acquisition system.

**Q.23** Explain the principle of working of a capacitive transducer. Give their advantages and disadvantages.

**Q.24** Describe the construction, working principle and application of piezoelectric transducer.

**Q.25** Write short notes on

Strain gauge

Classification of transducer

Photo electric Transducer