

Measurements and Instrumentation(IEC-403)

Question Bank

- Q.1** What is meant by the term measurement?
- Q.2** What are the essential elements of an instrument ?
- Q.3** What is measurement and measuring instrument? Explain.
- Q.4** What are different methods of measurements? Distinguish between direct and indirect methods of measurement.
- Q.5** Differentiate clearly between absolute and secondary instruments.
- Q.6** What is meant by transducer? Explain different types of transducer.
- Q.7** Explain the terms measurement, accuracy, Precision, sensitivity and reproducibility.
- Q.8** Explain different types of errors that may occur in measurements.
- Q.9.** What are different sources of errors ? How do these errors influence the accuracy of measurement.
- Q.10** What is the difference between fundamental and derived units.
- Q.11** Differentiate clearly between primary and secondary standards.
- Q.12** What do you mean by the standards? Explain different types of standards.
- Q.13** What is a deflecting torque necessary in an indicating instrument? Name the instruments which are based on different methods of producing deflecting torque.

Q.14 Discuss the construction and principle operation of dynamometer type wattmeter.

Q.15 What is the difference between AC and DC bridges. Explain different types of AC and DC bridges and derive its equation.

Q.16 What methods can be used for measurement of frequency? Explain the working of vibration reed frequency meter with its merits and demerits.

Q.17 Explain the construction and working principle of power factor meter. Discuss its limitation.

Q.20 Write short notes on the following.

- (a) Measurement of low resistance
- (b) Measurement of high resistance
- (c) Kelvin's double Bridge
- (d) Wien Bridge

Q.21 What is IEEE-488 Interface and RS-232. What are merits and demerits of this interface.

Q.22 Explain working operation of A to D and D to A Converter.

How many are the difference types of this converter.

Q.23 What do you mean by Data acquisition system? Explain PC based Data acquisition system.

Q.24 What are the three requirements of automatic test system.

Q.25 Explain the testing of Audio amplifier and receiver.

Q.26 What are some functions/controls of test equipment that are

not easily adapted to computer control? How are the some Data acquisition system Data acquisition system functions made controllable?

Q.27 Describe with the help of block diagram of spectrum analyzer.

Q.28 what is meant frequency spectrum of signal?

Q.29 Define harmonic distortion and give a method for its determination.