ELECTRONICS MEASUREMENT & INSTRUMENTATIONS

(3rd Sem)

Question Bank

Chapter-1

1. Define the terms: Precision & Resolution.
2. List the types of static errrors in a measuring instrument.
3. List the types of moving iron instruments.
4. ~~Discuss the basic principle of~~
4. Define Speed of an instrument.
5. Explain various types of errrors in an instrument.
6. Discuss the static characteristics of a measuring instrument.
7. Discuss the dynamic characteristics of a measuring instrument.

Chapter-2

1. What are the advantages of PMMC instrument.
2. Discuss the basic principle of PMMC movement with its advantages & disadvantages.
3. Discuss shunt type ohm meter.
4. Discuss the basic principle of operation of a DC ammeter.
5. Explain the principle of operation of Q-meter.
6. Explain the principle of operation of digital multimeter.
7. Explain the principle of operation of DC voltmeter.
8. Define Multirange Ammeter.
9. Discuss the basic principle of operation of moving iron instrument.

Chapter-3

1. Explain basic principle of operation of Ramp type digital voltmeter.
2. Differentiate betn $3\frac{1}{2}$ & $4\frac{1}{2}$ digital meter.
3. Define resolution & sensitivity of digital multimeter.
4. Explain the operation of a frequency meter with basic ckt diagram.

5. Explain the operation of digital measurement of time.
6. Explain the block diagram of LCR meter.
7. Explain the principle of operation of Digital Tachometer.

Chapter-4.

1. Explain the block diagram of a Oscilloscope.
2. Explain the block diagram of a Dual trace Oscilloscope.
3. Explain the block diagram of a Digital Storage Oscilloscope.
4. Write the application of Oscilloscope.
5. Define Lissajous pattern.
6. What is a function generator.

Chapter-5

1. Differentiate betn AC & DC bridge.
2. Using Wheatstone's bridge, explain the measurement of Unknown resistance
3. Explain the measurement of capacitance by Schering bridge.
4. Using Wein's bridge, explain the measurement of Unknown frequency.
5. Explain the measurement of inductance by Maxwell bridge.
6. Explain the measurement of inductance by Hay's bridge.
7. Explain De Sauty's bridge.
8. List the types of bridge used for the measurement of inductance.

Chapter-6

1. Define Transducers.
2. Write the advantage of Electrical Transducers.
3. Explain the working principle of Strain gauge.
4. Explain the working principle of thermocouple.
5. Discuss the working principle of optical pyrometer.
6. Explain working principle of load cell / Pressure cell.
7. Explain the working principle of LVDT
8. Explain the working principle of RTD.

9. Explain the working principle of Thermistor.

Chapter - 7

1. Define Signal generator.
2. Discuss Basic Wave Analyzer.
3. Define Data Acquisition system.
4. Discuss the working principle of AF Sine & Square wave generator.