

- Q.26 Explain the working principle of Dual Slope Type Digital Voltmeter.
- Q.27 Write five advantages of Digital instrument over Analog instrument.
- Q.28 Explain working principle of Earth Tester.
- Q.29 Explain different types of electrical instruments.
- Q.30 Explain any five front panel controls of CRO.
- Q.31 Explain Wave Analyzer.
- Q.32 Explain De-Sauty's bridge.
- Q.33 Explain Logic probe.
- Q.34 What is standard and explain its different types.
- Q.35 How amplitude of waveform is measured using CRO.

#### **SECTION-D**

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

- Q.36 Draw and explain block diagram of CRO in detail.
- Q.37 Explain Moving Iron type instrument with diagram.
- Q.38 Write short note on following:
- Meggar
  - Logic Comparator

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**4th Sem / Mechatronics**  
**Subject:- Electrical & Electronics Instrumentation**  
**and Measurement**

Time : 3Hrs.

M.M. : 100

#### **SECTION-A**

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

- Q.1 Write full form of AC
- Analog Coil
  - Alternating Current
  - Alternate Cycle
  - None of the above
- Q.2 Measurement methods are of \_\_\_\_\_ types.
- 4
  - 5
  - 2
  - 1
- Q.3 What are types of measuring instruments?
- Primary and secondary Instrument
  - Type 1 and type 2 Instrument
  - Absolute and Secondary Instrument
  - Absolute and Primary Instrument
- Q.4 Among the following which meter is regarded as Insulation Tester?
- Meggar
  - Frequency Meter
  - Insulator
  - Wattmeter

- Q.5 Multimeter is used to measure \_\_\_\_\_ quantity.  
a) Single                  b) Double  
c) Multiple                d) Triple
- Q.6 Which among the following is a part of the Cathode Ray Tube?  
a) Control Electrode    b) Electron Gun  
c) Focusing System      d) All of the above
- Q.7 The basic difference between square wave and pulse generator is their  
a) Waveforms shape     b) Duty cycles  
c) Frequency range     d) Cost
- Q.8 In the simplest form, an AC bridge consists of \_\_\_\_\_  
a) arms, source and a detector  
b) arms and source  
c) source and detector  
d) arms and detector
- Q.9 A quantity having discrete numerical value is  
a) An Analog quantity    b) Digital quantity  
c) Binary quantity        d) Natural quantity
- Q.10 The earth resistance can be measured by  
a) High Value Resistor  
b) Using an Earth Tester  
c) Ducter Ohmmeter Method  
d) All the above

## SECTION-B

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

- Q.11 What is Accuracy.  
Q.12 What is Deflecting Torque.  
Q.13 Expand PMMC.  
Q.14 Write the full form of CRO.  
Q.15 What is Duty Cycle.  
Q.16 Which bridge is used to measure DC quantity?  
Q.17 An instrument having continuous output is called \_\_\_\_\_ instrument.  
Q.18 What is Tong Tester.  
Q.19 What is Aquadag.  
Q.20 Expand DVM.

## SECTION-C

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

- Q.21 Write any five differences between Accuracy and Precision.  
Q.22 Describe the working principle of Function Generator.  
Q.23 Draw and explain the block diagram of Q meter.  
Q.24 Explain the working of Digital Multimeter.  
Q.25 Enlist the various types of Error in measurement.