

- 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:
- a) Meggar
 - b) 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
- a) Analog Coil b) Alternating Current
 - c) Alternate Cycle d) None of the above
- Q.2 Measurement methods are of _____ types.
- a) 4 b) 5
 - c) 2 d) 1
- Q.3 What are types of measuring instruments?
- a) Primary and secondary Instrument
 - b) Type 1 and type 2 Instrument
 - c) Absolute and Secondary Instrument
 - d) Absolute and Primary Instrument
- Q.4 Among the following which meter is regarded as Insulation Tester?
- a) Meggar b) Frequency Meter
 - c) Insulator d) Wattmeter

- Q.5 Multimeter is used to measure _____ quantity.
- a) Single b) Double
c) Multiple d) Tripple
- 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.