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**3rd Sem / Branch : Eltx/EI/Med. Eltx/Mechatronics/
(6th Sem) Power Eltx, Elect & Eltx Engg./GE (4th Sem)**
Subject:- Electronic Instruments and measurement

Time : 3Hrs. M.M. : 100

SECTION-A

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

- Q.1 Which of the following is caused by careless handling?
a) Systematic error
b) Gross error
c) Random error
d) None of the mentioned
- Q.2 write full form of DC
a) direct coil b) direct current
c) direct cycle d) None of the above
- Q.3 Which one of the following moving coil instruments is used only for DC measurement?
a) PMMC
b) Moving Iron Type
c) Both a and b
d) None of the above
- Q.4 The cathode of a C.R.O is usually coated with
a) Alkali metals
b) Tungsten or thorium oxide
c) Copper oxide
d) Barium or strontium oxide

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Q.5 _____ provide sinusoidal signal at the output.

- a) Oscillator
- b) Signal Generator
- c) DC Tachometer generator
- d) None of the above

Q.6 DC bridge consist of _____ arms.

- a) 2 b) 3
- c) 5 d) 4

Q.7 Full form of DSO is

- a) Direct signal Operator
- b) Digital system operator
- c) Digital signal oscillator
- d) Digital storage oscilloscope

Q.8 Digital multimeter is used for _____

- a) measuring a.c/d.c current/voltage and resistance
- b) measuring a.c/d.c current/voltage
- c) measuring d.c current and resistance
- d) measuring a.c voltage

Q.9 Q - meter is used to measure

- a) Quality factor b) Power factor
- c) current and voltage d) None of the above

Q.10 Logic pulser is used to insert

- a) Logic pulse in analog circuit
- b) Logic pulse in digital circuit
- c) Logic pulse in analog circuit and digital circuit.
- d) All the above

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SECTION-B

Note: Objective type questions. All questions are compulsory. $(10 \times 1 = 10)$

- Q.11 What is precision ?
Q.12 What is damping torque ?
Q.13 Expand CRT.
Q.14 PMMC is used to measure _____. (AC/DC)
Q.15 What is time period
Q.16 The Duty cycle of square wave generator is _____ percent. (50/75)
Q.17 How many arms are there in a bridge circuit?
Q.18 Write any one advantage of Digital Instrument.
Q.19 What is Range.
Q.20 Distortion factor meter is used to measure.

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. $(12 \times 5 = 60)$

- Q.21 Explain different types of Error in measurement.
Q.22 Explain Deflecting torque and Controlling torque.
Q.23 Write any five difference between Analog Multimeter and Digital Multimeter.
Q.24 Explain CRT with diagram.
Q.25 Explain working principle of Q-meter.
Q.26 How distortion is measured using Distortion Meter.

- Q.27 Describe the working principle of Pulse Generator.
Q.28 Write any five difference between AC bridge and DC bridge.
Q.29 Explain Wheat Stone Bridge.
Q.30 Explain Integrating type Digital Voltmeter.
Q.31 Explain Logic Probe.
Q.32 Write any five application of multimeter.
Q.33 Explain different methods of Measurement.
Q.34 Explain repulsion type moving iron instrument.
Q.35 Write any five specification of CRO.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. $(2 \times 10 = 20)$

- Q.36 Explain Digital storage Oscilloscope (DSO) with block diagram.
Q.37 Explain construction and working principle of permanent magnet moving Coil (PMMC) instrument.
Q.38 Write short note on following.
a) Function Generator.
b) Logic Pulser

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