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5th Sem. / Automation & Robotics
Subject : Electronic Instrumentation & Measurements

Time : 3 Hrs. M.M. : 60

SECTION-A

Note: Multiple Choice Questions. All Questions are compulsory. (6x1=6)

Q.1 The measure of reproducibility of measurement is knows as: (CO1)

a) Accuracy b) Precision

c) Fidelity d) Resolution

Q.2 In a moving coil meter, the coil is typically suspended between. (CO1)

a) Two permanent magnets

b) An electromagnet and a capacitor

c) A resistor and a capacitor

d) Two solenoids

Q.3 What is the main advantage of Digital Storage Oscilloscope (DSO) over an analog oscilloscope:(CO1)

a) Higher frequency range

b) Capability to store and analyze signals

c) Higher voltage measurement accuracy

d) Easier calibration

Q.4 Which of the following is the primary purpose of a signal generator? (CO3)

a) Measure voltage

b) Display waveform on a screen

c) Store waveform data

d) Generate electrical signals of varying frequency and amplitude

Q.5 Maxwells' Induction Bridge is primarily used to measure: (CO4)

a) Resistance b) Inductance

c) Capacitance d) Impedance

Q.6 What is the primary purpose of a logic pulser in digital circuit testing? (CO5)

a) Measure the voltage of a signal

b) Generate pulses to simulate digital signals

c) Display the signal waveform

d) Measure the frequency of a signal

Section-B

Note: Objective/Completion type questions. All questions are compulsory. (6x1=6)

Q.7 What is measurement. (CO1)

Q.8 Expand PMMC_____. (CO1)

Q.9 Define Electron Gun? (CO2)

Q.10 DSO stands for _____. (CO2)

Q.11 The quality factor of a coil is given by_____. (CO3)

Q.12 DVM stands for _____. (CO5)

Section-C

Note: Short answer type Question. Attempt any eight questions out of Ten Questions. (8x4=32)

Q.13 Differentiate between accuracy and Precision. (CO2)

Q.14 How the range of ammeter can be extended? (CO2)

Q.15 What are the major applications of CRO? (CO2)

Q.16 What are the various ways of focusing? (CO2)

Q.17 Give some advantages of signal generator. (CO2)

Q.18 Write a short note on Hay's Bridge. (CO2)

Q.19 Give the advantages of Maxwell Induction Bridge. (CO2)

Q.20 Write a short note on AC Bridge. (CO2)

Q.21 Explain working principle of Dual Slope DVM. (CO5)

Q.22 What do you understand by Logic analyzer? (CO2)

Section-D

Note: Long answer questions. Attempt any two question out of three Questions. (2x8=16)

Q.23 Draw the block diagram of CRO and explain each block in detail. (CO2)

Q.24 What is pulse generator describe its principle of working & construction? (CO3)

Q25 Write differences between analog and digital instruments. (CO5)