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5th Sem / Automation & Robotics

Subject : Electronic Instrumentation and Measurements

Time : 3 Hrs. M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 Resistance can be measured with the help of (CO1)

a) Wattmeter b) Voltmeter

c) Ammeter d) Ohmmeter

Q.2 The focusing method used in CRO is (CO2)

a) mechanical focusing

b) thermal focusing

c) electostatic focusing

d) electromagnetic focusing

Q.3 Sensitivity of a basic meter is measure in (CO1)

a) ohm meter b) Ohm/Volt.

c) ampere d) Volt/ampere

Q.22 What do you mean by the term Calibration? (CO5)

SECTION-D

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

Q.23 Explain the working of a CRO with the help of block diagram in detail. (CO2)

Q.24 Explain the construction and working of a Function generator with the help of block diagram in detail. (CO3)

Q.25 Draw the circuit diagram of Wheat stone bridge and explain how unknown resistance can be measured using it. (CO5)

Q.4 D.C. bridges are used for measurement of (CO3)

a) resistance b) capacitance

c) current d) inductance

Q.5 The main specification of a CRO is its (CO2)

a) Weight b) Power supply

c) Dimensions d) Bandwidth

Q.6 Inductance is measured by which one of the following? (CO4)

a) Wheat stone bridge b) Schering bridge

c) De Sauty's bridge d) Maxwell's bridge

SECTION-B

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

Q.7 Define the term Accuracy. (CO1)

Q.8 Voltmeter is always connected in _____ (CO1)

Q.9 In CRO, Vertical deflection plates are kept _____ (CO2)

Q.10 Q-Factor (Quality Factor) of a coil = (CO4)

Q.11 The bridge used to measure inductance is _____ (CO4)

Q.12 What is the full form of VOM meter? (CO5)

SECTION-C

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

Q.13 Differentiate between direct and indirect methods of measurement. (CO1)

Q.14 Explain the effect of higher frequencies on measurement using multimeter. (CO1)

Q.15 What are different standards? (CO2)

Q.16 How a logic probe is helpful in troubleshooting of a digital circuit? (CO1)

Q.17 Describe the working of a DSO. (CO2)

Q.18 Explain duty cycle of a pulse signal. (CO2)

Q.19 Explain the main advantage of null indication used in bridges. (CO3)

Q.20 What is the use of a Logic Pulser? (CO3)

Q.21 Explain the term loading effect in measurement. (CO4)