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2nd Sem / ECE, ECE
(For Speech and Hearing Impaired)
Subject : Electronic Instruments and Measurement

Time : 3 Hrs. M.M. : 60

SECTION-A

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

Q.1 What is the smallest change in applied input that will indicate a detectable change in output of an instrument? (CO1)

a) Accuracy b) Precision

c) Sensitivity d) Resolution

Q.2 The focusing method used in CRO is (CO3)

a) mechanical focusing

b) thermal focusing

c) electrostatic focusing

d) electromagnetic focusing

Q.3 Inductance is measured by which one of the following? (CO4)

a) Wheat stone bridge b) Schering bridge

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

Q.4 The principle of Q-meter is based on (CO4)

a) parallel resonance b) series resonance

c) both a and b d) none of the above

Q.5 Lissajous patterns can be used to measure (CO3)

a) frequency b) phase difference

c) both a and b d) intensity of light

Q.6 The main specification of a CRO is its (CO3)

a) Weight b) power supply

c) dimensions d) bandwidth

SECTION-B

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

Q.7 Q-Factor (Quality Factor) of a coil = _____ (give the formula) (CO4)

Q.8 Gross errors occur due to human mistakes. (True/False) (CO1)

Q.9 The input resistance of an ideal ammeter is infinite. (True/False) (CO2)

Q.10 Sensitivity of a basic meter is measured in_____ (CO1)

Q.11 The loading effect is a desirable feature in measuring instruments. (True/False) (CO1)

Q.12 Write the full form of VOM. (CO2)

SECTION-C

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

Q.13 How a Logic Pulser is useful in digital circuits? (CO1)

Q.14 Why precision is no guarantee to accuracy? (CO1)

Q.15 What is the meaning of calibration? (CO1)

Q.16 Define measurand. (CO1)

Q.17 Write four applications of CRO (CO3)

Q.18 Describe the working of a Function generator with the help of block diagram. (CO4)

Q.19 How the range of an ammeter is extended? (CO2)

Q.20 Explain the main constituents of a low frequency generator? (CO4)

Q.21 Explain the importance of standards in measurement. (CO1)

Q.22 Elaborate the need of ADC and DAC in a DSO. (CO3)

SECTION-D

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

Q.23 Explain the construction and working of attraction type of Moving Iron Instruments. (CO2)

Q.24 Explain the circuit and working of Maxwell's induction bridge and its applications. (CO4)

Q.25 a) Compare analog and digital instruments. (CO5)

b) Explain the working of a Digital Multimeter with the help of a block diagram