

No. of Printed Pages : 4 181036/171036
Roll No. /121036/031036

Eltx., Mechatronics, Med. Eltx.
Subject:- Electronic Instr. & Measurement

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 Gross error occurs due to human mistakes. (CO1)

- a) True b) False

Q.2 _____ is the ratio of change in magnitude of output signal to the change in magnitude of input signal. (CO1)

- a) Resolution b) Accuracy
c) Sensitivity d) Quality

Q.3 Harmonic distortion in amplifier is caused by : (CO5)

- a) Presence of noise
b) Positive of noise
c) Non-linear characteristics of active device
d) None of these

Q.4 Analog instruments have more accuracy than digital instruments. (CO6)

- a) True b) False

Q.5 A CRO uses : (CO2)

- a) Electrostatic focussing

(1)

181036/171036
/121036/031036

- b) Electromagnetic focussing
c) Both
d) None of above

Q.6 Low resistance is measured by : (CO4)

- a) Maxwell's bridge b) Desauty's bridge
c) kelvin double bridge d) Wein bridge

Q.7 Signal generators is also known as: (CO6)

- a) Oscillator b) Amplifier
c) Attenuator d) None of these

Q.8 The basic principle of D Arsonavol instrument is the same as the principle of. (CO1)

- a) Moving iron instrument
b) PMMC instrument
c) Induction instrument
d) Moving coil instrument

Q.9 Which of the following is used for extending the range of an a.c ammeter. (CO3)

- a) Capacitor b) Shunt
c) Inductor d) Current Transformer

Q.10 CRO can be used for measuring: (CO3)

- a) Ac voltage only b) DC voltage only
c) frequency d) None of above

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 Define measurand. (CO1)

(2)

181036/171036
/121036/031036

- Q.12 Explain damping torque. (CO2)
Q.13 Name the deflection plates used in CRT. (CO2)
Q.14 Define Instrumentation amplifier. (CO8)
Q.15 The quality factor of a coil is : $Q = \frac{X}{R}$ (CO9)
Q.16 A logic probe is used to check _____ states in digital circuits. (CO11)
Q.17 Write full form of DSO. (CO2)
Q.18 CRO can be used to measure voltage. (True/False) (CO3)
Q.19 What is Aquadag? (CO3)
Q.20 Write any two advantages of Wheat Stone bridge. (CO4)

SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. $(12 \times 5 = 60)$
- Q.21 What is error ? What are the types of errors? (CO1)
Q.22 What are advantages of moving iron instruments? (CO2)
Q.23 What is the difference between analog and digital multimeter? (CO6)
Q.24 Explain in brief spectrum analyzer. (CO5)
Q.25 What is the need of blanking during flyback in CRO? (CO6)
Q.26 What are different front panel controls in CRO? (CO6)

- Q.27 Draw the block diagram of a function generator. (CO7)
Q.28 Explain working of ramp type digital voltmeter. (CO6)
Q.29 Explain, How RLC bridge is used? (CO10)
Q.30 Explain working of Wheat Stone bridge. (CO10)
Q.31 What is difference between voltmeter and ammeter? (CO5)
Q.32 Draw block diagram of multimeter. (CO6)
Q.33 Write short note on PMMC instruments. (CO3)
Q.34 Write specifications of CRO. (CO5)
Q.35 What are different methods of measurement? (CO1)

SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. $(2 \times 10 = 20)$
- Q.36 What is the principle of Moving coil type instrument? Explain its construction and working with neat diagram. (CO2)
Q.37 Draw and explain block diagram of CRO. (CO3)
Q.38 Explain how Q meter is used for the measurement of Quality factor of a coil. (CO9)

(Note: Course outcome/CO is for office use only)