

- Q.28 What are the advantages and limitations of Wheatstone bridge?
- Q.29 Explain with diagram the usage of Hay's bridge.
- Q.30 Explain in brief the function of earth tester.
- Q.31 Write short note on logic analyzer.
- Q.32 Write short note in Q-meter
- Q.33 Discuss briefly, the working principle of dual slope type digital voltmeter
- Q.34 Explain the terms: Sensitivity and Resolution.
- Q.35 Write short note on Megger.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Draw block of a diagram of CRO. Also explain function of each block in detail.
- Q.37 What do you mean by moving iron instruments? Explain with diagram the attraction type moving iron instrument.
- Q.38 Define standard. What are the different types of standards? Explain in detail.

No. of Printed Pages : 4

202444/122444

Roll No.

4th Sem / Mechatronics

Subject:- Electrical & Electronic Instrumentation and Measurement

Time : 3Hrs.

M.M. : 100

SECTION-A

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

- Q.1 Gross errors are occurred due to which of following reasons
- neglecting the source of error
 - incorrect reading of the instruments
 - improper recording of reading
 - all of the above
- Q.2 The deflection of any instruments is determined by the combined effect of _____
- deflecting torque
 - damping torque
 - controlling torque
 - all of the above
- Q.3 The voltmeter sensitivity is expressed in _____
- Ω/V
 - Ω/V^2
 - Ω^2/V
 - Ω^2/V^2
- Q.4 DSO stands for _____
- Dual System Oscillator
 - Dual storage Oscillator
 - Digital Storage Oscilloscope
 - Digital System Oscilloscope

- Q.5 Which of the following part is called as the heart of CRO?
- a) CRT b) Sweep Generator
c) Trigger Circuit d) Amplifier
- Q.6 AC bridges are used for the measurement of _____
- a) Capacitances
b) Resistances and inductances
c) Inductances and capacitances
d) Resistances, inductances & capacitances
- Q.7 Which among the following is a type of digital voltmeters?
- a) Ramp type b) Integrating
c) Potentiometric type d) All of the above
- Q.8 The AC Bridge which is used for the measurement of frequency is _____
- a) Schering bridge b) Wien bridge
c) Hay's bridge d) Anderson bridge
- Q.9 If the instrument is used in wrong manner while application, then it will result in _____
- a) Systematic error b) Random error
c) Instrument error d) Environmental error
- Q.10 The spectrum analyzer can easily measure very _____
- a) high amplitudes and high frequency
b) high amplitudes and low frequency
c) low amplitudes and high frequency
d) low amplitudes and low frequency

SECTION-B

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

- Q.11 What do you mean by error?
- Q.12 What is tong tester.
- Q.13 Name any one bridge circuit used to measure inductance.
- Q.14 Whether a CRO is used to observe frequency of signal?
- Q.15 Define resolution.
- Q.16 Define the term precision.
- Q.17 Expand PMMC.
- Q.18 Give examples of Moving iron type instruments.
- Q.19 Define Duty Cycle.
- Q.20 What is deflecting torque?

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 What are the major applications of CRO?
- Q.22 What are LCR meters? Discuss their applications.
- Q.23 What are different sources of error?
- Q.24 What are the advantages of PMMC instruments?
- Q.25 Distinguish between analog and digital instruments.
- Q.26 How voltage is measured using CRO.
- Q.27 What are the applications of function generator?