

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS

IV-B.TECH-I-Semester End Examinations (Regular) - December- 2025

ELECTRONIC MEASUREMENTS AND INSTRUMENTATION

(Common for CSE, CSC, CSM & CSD)

[Time: 3 Hours]

[Max. Marks: 60]

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 10 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A

(10 Marks)

1. a)	Define Precision.	[1M]
b)	Define Voltmeter.	[1M]
c)	Define Heterodyne Wave Analyzer.	[1M]
d)	What are the specifications of Pulse and Square wave generator?	[1M]
e)	What is meant by Lissajous figures?	[1M]
f)	Define Dual Beam CRO.	[1M]
g)	What are the types of Transducers?	[1M]
h)	What is meant by strain guage transducer?	[1M]
i)	Define Data Acquisition Systems.	[1M]
j)	Define wheat stone Bridge.	[1M]

PART-B

(50 Marks)

2.	Write a short note on (i) Gross Errors (ii) Systematic errors (iii) Random errors.	[10M]
OR		
3.	With the help of circuit diagram, describe the construction & working of a Series type Ohmmeter.	[10M]
4.	With a neat sketch, explain the operation of arbitrary waveform generator.	[10M]
OR		
5.	Describe the operation of Frequency selective type wave Analyzer using a neat diagram.	[10M]
6.	Describe in detail the construction and working of a Digital Storage Oscilloscope.	[10M]
OR		
7.a)	Explain in detail the important features of CRT.	[7M]
b)	What are the Standard Specifications of CRO?	[3M]
8.	Explain in detail about the Strain gauge Transducer.	[10M]
OR		
9.	Draw the diagram of Resistance Thermometer and explain briefly.	[10M]
10.	Explain briefly how a Maxwell Bridge is used for measuring an unknown inductance.	[10M]
OR		
11.	Draw and Explain about the Velocity Measurements.	[10M]
