

Code No.: R22EC711OE

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H.T.No.

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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 gauge 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]
