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Roll No.

221051

**5th Sem. / ECE, ECE)
(For speech and Hearing Impaired)
Subject : Instrumentation**

Time : 3 Hrs.

M.M. : 60

SECTION-A

Note: Multiple Choice Questions. All Questions are compulsory. (6x1=6)

- Q.1 Systematic errors may arise due to different reasons:
a) Instrument error b) Environment error
c) Both A & B d) None of above
- Q.2 The deflection of any instrument is determined by the combined effect of the :
a) Deflecting torque/force
b) Control torque/force
c) Damping torque/force
d) All of these
- Q.3 The integral device that connects the oscilloscope to the test circuit is a :
a) Probe b) Test needle
c) Table cable d) None of these

Q.4 Vacuum tube voltmeter can be used to measure:

- a) DC Voltage
- b) AC Voltage
- c) AC as well as DC voltage
- d) None of these

Q.5 The source of emission of electrons in a CRT is :

- a) PN Junction diode
- b) A barium and strontium oxide coated cathode
- c) Accelerating anode
- d) Pre-accelerating anode

Q.6 LEDs emit light

- a) Only is red color b) Only in yellow colour
- c) Only is green colour d) All of these

SECTION-B

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

- Q.7 What do you mean by the term "Measurement".
- Q.8 Define transducers.
- Q.9 Write the principle of Piezoelectric Transducers.

- Q.10 Define Pressure.
- Q.11 What is flow measurement?
- Q.12 Define temperature.

SECTION-C

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

- Q.13 What is humidity? What are its different types?
- Q.14 Define the term Instrumentation System.
- Q.15 Write a short note on force.
- Q.16 What is the importance of measurement?
- Q.17 What are the three major components of general measurement system?
- Q.18 What are different types of pressure? Explain its types.
- Q.19 Explain bimetallic thermometer in detail.
- Q.20 How dew is formed?
- Q.21 Describe the important elements of a measurement system.
- Q.22 What are the different methods of measurement?

SECTION-D

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

- Q.23 Compare the direct and indirect method of measurements.
- Q.24 How transducers are classified?
- Q.25 Explain the Piezoelectric Phenomenon and suggest the materials that exhibit this phenomenon.