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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(EIE) (2011 & Onwards) (Sem.-3)

ELECTRONIC MEASUREMENT AND INSTRUMENTATION

Subject Code : EC-203

M.Code : 57505

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A**Q1 Answer briefly :**

- A) What are the display devices used in digital instruments.
- B) Give the three basic requirement of transducer.
- C) Distinguish between LCD and LED.
- D) Describe the features of Nixie tube with its diagram.
- E) What is the full form of VTVM?
- F) Why are CT and PT called instrument transformers?
- G) Compare AM verses FM Telemetry.
- H) What are data acquisition systems also explain its necessity?
- I) How is harmonic distortion or distortion factor defined? Define the various methods to measure the harmonic distortion.
- J) What is transducer? Explain the difference between sensor and transducer.

SECTION-B

- Q2 What is multiplexing in telemetry system? Explain the principle of frequency division multiplexing.
- Q3 Explain the working principle of Weston frequency meter.
- Q4 Discuss the working of Maxwell's bridge for measurements of inductance. For what range of Q-factor of the coil, the bridge is suitable?
- Q5 What is meant by data acquisition system? What are its categories and main elements? Discuss working of a magnetic tape recorder used in DAS?
- Q6 What are various methods of data transmission and describe LCR.

SECTION-C

- Q7 a) Explain the principle of electrostatic focusing of electron beam in a CRO.
b) What are capacitive transducers? What are their advantages and disadvantages?
- Q8 Explain the construction and principle of working of a linear voltage differential transformer (L.V.D.T).
- Q9 With the help of schematic diagram explain the complete working and construction of CRT.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.