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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(ECE) (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**1. Answer briefly :**

- a) What are the different types of Digital Voltmeter?
- b) What do you mean by smart sensors?
- c) Give the difference between accuracy and precision.
- d) Compare Moving coil with Moving iron instruments.
- e) Draw the block diagram of Digital Data Acquisition System.
- f) What are the key features of fully automatic digital instruments?
- g) What are random errors?
- h) What is environmental error?
- i) Explain split beam method.
- j) What is loading effect?

SECTION-B

2. Draw and explain the diagram of digital multi-meter.
3. Draw and explain the block diagram representation of a generalized measurement system and its functional elements.
4. Explain with neat diagram the working of the instrumentation amplifier.
5. Explain with neat diagram the working of strip chart recorder.
6. What is Maxwell Bridge? How it can be used to measure inductance and capacitance? Discuss in detail.

SECTION-C

7.
 - a) Draw and explain the working of current transformer.
 - b) Draw and explain the working of LVDT. Also list the advantages of LVDT.
8.
 - a) Draw and explain the working of data acquisition systems.
 - b) Discuss the internal structure of LCR meter.
9. Write short note on following :
 - a) Seven Segment Display
 - b) Photoelectric Transducer

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.