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Total No. of Pages : 02

Total No. of Questions : 18

B.Tech. (Automation & Robotics) (2012 & Onward) (Sem.-5)

ELECTRONIC MEASUREMENT AND INSTRUMENTATION

Subject Code : BTEC-404

M.Code : 70478

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS 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**Answer briefly :**

- Q1 State the advantages and disadvantages of PMMC instruments.
- Q2 What is meant by instrumentation and also define measurement?
- Q3 What is meant by special oscilloscope?
- Q4 State the advantages of Maxwell Wien Bridge.
- Q5 Explain the data acquisition system and its uses.
- Q6 What are the various methods of data transmission?
- Q7 Name the different type of frequency meters.
- Q8 Describe the digital voltmeter.
- Q9 Name the various resistance measuring instruments and write down the advantages of Kelvin double bridge.
- Q10 Differentiate between precision and accuracy.

SECTION-B

- Q11 With a neat diagram explain in detail the construction of PMMC instrument.
- Q12 Explain the seven segment display in detail and list its various applications.
- Q13 Explain transducer and describe different modes of operations of piezoelectric meter transducer and its uses.
- Q14 Explain position telemetering system with neat and clean diagram.
- Q15 Sketch and explain the working of moving-coil instrument.

SECTION-C

- Q16 a) How is the voltmeter calibrated with DC potentiometer?
b) What is the use of LVDT? Discuss its basic principle of operation.
- Q17 Draw the block diagram of an electronic voltmeter and explain its operation.
- Q18 Write short notes on :
a) Maxwell Wien bridge
b) Digital frequency meter

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.