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Total No. of Pages : 02

Total No. of Questions : 18

B.Tech. (EE) PT (Sem.-2)
ELECTRICAL MEASUREMENT & INSTRUMENTS
Subject Code : BTEE-303
M.Code : 71536

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 & C. have FOUR questions each.
3. Attempt any FIVE questions from SECTION B & C carrying EIGHT marks each.
4. Select atleast TWO questions from SECTION - B & C.

SECTION-A**Answer briefly :**

- Q1 State the advantages of Dynamometer type instruments.
- Q2 List the advantages and applications of ac potentiometers.
- Q3 Write down the sources of EM waves, which can cause interference?
- Q4 State the method of reducing ground loop interference.
- Q5 What is the working principle of wattmeter employed in measuring equipment?
- Q6 What are the practical difficulties in AC potentiometer?
- Q7 List the disadvantages of Hay's bridge.
- Q8 Principle of operation of a current transformer.
- Q9 How the range of instrument can be extended in PMMC instruments?
- Q10 What are parasitic voltages and how they are eliminated?

SECTION-B

- Q11 Derive the bridge balance condition for the Maxwell bridge and Schering bridge.
- Q12 Describe with help of suitable diagrams basic and modern form of DC potentiometer.
- Q13 Explain the working of a digital multimeter with a schematic block diagram.
- Q14 Explain the function of 3 phase energy meter and wattmeter.

SECTION-C

- Q15 Discuss the advantages and limitations of electromagnetic interference in measurements.
- Q16 Describe the construction and functioning of current transformer. Also discuss its testing and characteristics.
- Q17 a) Describe the construction and working of PMMC instrument. Derive the equation for deflection if the instrument is spring controlled.
- b) What is the use of self balancing potentiometer in the field of electrical measurement?
- Q18 Write short notes on following :
- a) Flux Meter
- b) Wein Bridge

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.