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Question Paper Code:93306

B.E. / B.Tech. DEGREE EXAMINATION, AUGUST 2021

Third Semester

Electrical and Electronics Engineering

19UEE306 – ELECTRICAL MEASUREMENTS AND INSTRUMENTATION

(Regulation 2019)

Duration: 1:45 hour

Maximum: 50 Marks

PART A - (10 x 2 = 20 Marks)

(Answer any ten of the following questions)

1. Examine the Accuracy of an instrument? CO1- R
2. Classify the types of calibration methodologies CO1- R
3. The expected value of voltage across the resistor is 100V. However the measurement gives the value of 98V. Calculate percentage of error CO1- R
4. Classify the types of instruments used as ammeter and voltmeter. CO2- U
5. Define creeping in energy meter. CO2- U
6. Illustrate the reason for using MI instruments on both A.C and D.C CO2- U
7. A Wheatstone bridge consists of the following parameters. $R_1=12K\Omega$, $R_2 = 16K\Omega$ and $R_3 = 42K\Omega$. Find the unknown resistance R_4 . CO3- U
8. Classify the various types of Grounding Techniques CO3- U
- 9 Explain about Schering bridge with a neat sketch CO3- U
- 10 Enumerate the merits and demerits of pulse width modulation recording. CO4- U
- 11 Explain the different types of amplifiers used for CRO's CO4- U
- 12 Outline the diagram for dot matrix display? CO4- U
- 13 What is the need of sample and hold circuit in A/D convertor? CO5- U
- 14 Explain the working of LVDT? CO5- U
- 15 Explain a short note on data acquisition system. CO5- U

PART – B (3 x 10= 30 Marks)

(Answer any three of the following questions)

16. Explain in details about different types of Calibration Procedure. CO1- U (10)
17. Classify the types for determination of B-H curve with a neat sketch. CO2- U (10)
18. Explain the construction and working of single phase energy meter. CO3- U (10)
19. Outline the basic block diagram of a digital data logger system. CO4- U (10)
20. Explain about Resistive transducer and illustrate the construction and working of Potentiometer with a neat sketch. CO5- U (10)