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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech III Year I Semester Supplementary Examinations December-2021

ELECTRONIC MEASUREMENTS AND INSTRUMENTATION

(Electronics and Communication Engineering)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

- 1 a Explain the dynamic response of Zero order, first order, second order instrument. L1 6M
b Explain Multirange AC voltmeter. L2 6M

OR

- 2 a With neat sketch explain thermocouple type RF ammeter. L2 6M
b Discuss about basic DC Ammeters. L2 6M

UNIT-II

- 3 a Explain the major parts of CRT with a block diagram. L2 6M
b Compare dual trace oscilloscopes and dual beam CRO. L4 6M

OR

- 4 a Explain with a diagram how frequency & phase can be measured using a Lissajous method. L1 6M
b List and explain any two different types of CRO probes. L1 6M

UNIT-III

- 5 a Discuss in detail about RF signal generator operation. L2 6M
b Explain the working of a standard sweep generator with diagram. L2 6M

OR

- 6 a Describe with diagram the operation of a Logic analyser. L2 6M
b Draw the circuit diagram and explain the working of a heterodyne type wave analyser. L2 6M

UNIT-IV

- 7 a Describe in detail about EMI & EMC with suitable examples. L2 6M
b Explain how a Maxwell bridge can be used for measuring an unknown inductance. L2 6M

OR

- 8 a What are the applications of Wheatstone bridge? And list out its limitations. L2 6M
b Describe the operation of the Wheatstone bridge and derive the expression for DC resistance. L2 6M

UNIT-V

- 9 a Explain strain gauge for resistance measurement. L2 6M
b Explain the operation of potentiometric transducer. L2 6M

OR

- 10 a List the three types of temperature transducers & describe the application of each. L2 6M
b Explain about pH measurement. L2 6M

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