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

B.Tech III Year I Semester Supplementary Examinations November-2020

ELECTRONIC MEASUREMENTS AND INSTRUMENTATION

(Electronics & Communication Engineering)

Time: 3 hours

Max. Marks: 60

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

UNIT-I

- 1 a Explain about static characteristics of measuring instrument. 7M
b Explain the process of calibration. 5M

OR

- 2 a Explain different types of errors that occur in measurements. 6M
b Explain about Differential type voltmeter. 6M

UNIT-II

- 3 a Discuss the construction and working of a digital sampling oscilloscope. 6M
b Explain in details the construction and working of Time base generator. 6M

OR

- 4 a Explain block diagram of Cathode Ray oscilloscope. 6M
b Explain the function of trigger circuit. 6M

UNIT-III

- 5 a With a neat diagram discuss the operation of a pulse generator. 6M
b Explain the working of arbitrary waveform generator. 6M

OR

- 6 a Discuss in detail about RF signal generator operation. 4M
b Explain the method of generating of random noise with neat sketch. 8M

UNIT-IV

- 7 a Discuss the working principle of Q-meter & its applications. 8M
b Write short note on interference & explain noise reduction techniques. 4M

OR

- 8 a Explain the operation of Kelvin Bridge. 6M
b Derive the expression for unknown resistance of Kelvin bridge. 6M

UNIT-V

- 9 a Draw and explain the Resistance Thermometer. 6M
b List the advantages, disadvantages and applications of LVDT. 6M

OR

- 10 a Explain about pH measurement. 6M
b Define piezoelectric effect. Write the applications of piezoelectric transducer. 6M

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