

CBCS SCHEME

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15NT44

Fourth Semester B.E. Degree Examination, Dec.2018/Jan.2019 Electronic Instruments and Measurements

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing one full question from each module.

Module-1

- 1 a. Define error. Mention the types of errors. (04 Marks)
b. Write a note on Ayrton shunt and mention the requirements of a shunt. (06 Marks)
c. What is transistor voltmeter? Explain the working of transistor voltmeter with a neat diagram. (06 Marks)

OR

- 2 a. Describe in detail about RF ammeter, its types and limitations. (10 Marks)
b. Elucidate average responding voltmeter with the help of a neat circuit diagram. (06 Marks)

Module-2

- 3 a. Explain the principle and working of dual slope type DVM. (08 Marks)
b. Explain the most commonly used principles of ADC. (08 Marks)

OR

- 4 a. Explain digital multimeters with a diagram. (08 Marks)
b. Explain how Decade Counter works. (08 Marks)

Module-3

- 5 a. Explain the block diagram of oscilloscope. (08 Marks)
b. Discuss standard signal generator with the help of a diagram. (08 Marks)

OR

- 6 a. Discuss vertical amplifier with the help of a diagram. (06 Marks)
b. Explain function generator with a diagram. (10 Marks)

Module-4

- 7 a. Explain field strength meter with the help of a block diagram. (10 Marks)
b. Discuss Wheatstone's bridge with a neat circuit diagram. (06 Marks)

OR

- 8 a. Explain how a phase sensitive detector works. (08 Marks)
b. What is the principle of stroboscope? Explain its working with an example. (08 Marks)

Module-5

- 9 a. Write a note on transducers and actuators. (04 Marks)
b. Explain in detail thermistor and its various configurations. (08 Marks)
c. Write a note on semiconductor photo diode. (04 Marks)

OR

- 10 a. Write a note on capacitive transducer. (06 Marks)
b. With the help of a neat diagram, explain the working of LVDT and mention its advantages and limitations. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.