

GBCS Scheme

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15NT44

Fourth Semester B.E. Degree Examination, June/July 2017 Electronic Instruments and Measurements

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. Write a short note on Probability of errors and limiting errors. (06 Marks)
b. Brief about extending of ammeter ranges. (04 Marks)
c. Discuss on true RMS voltmeter, with the help of a neat circuit diagram. (06 Marks)

OR

- 2 a. What is an Error? Mention types of errors. (04 Marks)
b. Describe about Multirange voltmeter and explain how the range of a voltmeters can be extended to measure high voltages. (06 Marks)
c. Explain differential voltmeter with the help of a neat circuit diagram. (06 Marks)

Module-2

- 3 a. Explain the most commonly used principles of ADC. (08 Marks)
b. Describe about the following : i) Digital Tachometer ii) Digital pH meter. (08 Marks)

OR

- 4 a. Write a note on Continuous balance DVM. (04 Marks)
b. What is 3½ - digit display? Write a note on resolution and sensitivity of digital meters. (04 Marks)
c. Discuss about Universal Counter and explain how it works. (08 Marks)

Module-3

- 5 a. Explain about simple CRO, with neat sketch. (05 Marks)
b. Write about the Horizontal Deflecting system. (06 Marks)
c. Brief about Fixed and variable AF Oscillator. (05 Marks)

OR

- 6 a. Discuss about different types of Probes for CRO. (06 Marks)
b. Explain about AF Sine and Square wave generator, with a neat sketch. (10 Marks)

Module-4

- 7 a. Discuss about Q – Meter and state its advantages. (08 Marks)
b. Write a brief note on Wheatstone's bridge with a neat circuit diagram and advantages. (08 Marks)

OR

- 8 a. Explain how a Phase sensitive detector works. (08 Marks)
b. Describe about Vector Impedance meter with circuit diagram. (08 Marks)

Module-5

- 9 a. Write a short note on Transducers and Actuators. (04 Marks)
b. Brief on Capacitive transducer. (06 Marks)
c. Explain the working of Photo – transistor, with the help of neat diagrams. (06 Marks)

OR

- 10 a. With the help of a neat diagram, explain the working of LVDT and mention the advantages and limitations. (10 Marks)
b. Explain about piezo electrical transducer, with a neat sketch. (06 Marks)

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