B - 603

(Pages : 02)

[Total No. of Questions : 8]

COMP 4 - 4 (RC)

S.E. (Comp.) (Semester - IV) (RC) Examination, Nov. - 2011
ELECTRONIC MEASUREMENTS

Duration : 3 Hours

Total Marks : 100

Instructions : 1) Answer total five questions and one question is compulsory from each Module.

2) Assume suitable data if required and mention it clearly.

MODULE - I

Q1) a) Explain the fundamental and derived units. [8]

b) Describe the different types of errors found in measurement system. [8]

c) What are International Standards. [4]

Q2) a) Explain a electronic multimeter in detail. [8]

b) Show how a Q-meter can measure high impedance components? [7]

c) Draw the block diagram of a vector impedance meter and explain its operations. [5]

MODULE - II

Q3) a) What are the functions of the delay line? Explain the distributed parameter delay line. [8]

b) Explain how focussing of the electron beam is called out in a oscilloscope? [6]

c) Explain the block diagram of a general-purpose oscilloscope. [6]

Q4) a) Explain wideband sweep generator. [7]

b) Draw a block diagram and explain the working of a function generator. [7]

c) Explain the operation of Sine wave generator with a diagram. [6]

MODULE - III

Q5) a) With the help of a block diagram, explain in detail the Harmonic distortion analyzer. [8]

b) Explain spectrum analyzer for higher frequencies. [8]

c) Explain the application of a heterodyning wave analyzer. [4]

Q6) a) What is a Prescalar? What effect does it have on the performance of a frequency counter? Explain how resolution and accuracy are affected. [8]

b) Explain automatic and computing counters with neat diagram. [8]

c) Draw the block diagram of a digital frequency meter. [4]

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MODULE - IV

Q7) a) Explain with the help of a diagram, the operation of a photomultiplier tube. [6]

b) Give the various points to be considered while choosing a transducer for a certain application. [6]

c) Explain the constructional features of a thermocouple temperature transducer. [8]

Q8) a) Explain how interfacing transducers to electronic control and measuring systems done. [6]

b) What is signal conditioner? Explain what are the basic elements of a signal conditioner. [8]

c) Write a short note on spatial encoders. [6]

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