

Total No. of Questions : 10 ] [ Total No. of Printed Pages : 2

Roll No. ....

**EC-303**

**B. E. (Third Semester) EXAMINATION, Dec., 2011**

(Grading/Non-Grading)

(Electronics and Communication Engg. Branch)

ELECTRONIC INSTRUMENTATION

(EC-303)

Time : Three Hours

Maximum Marks :  $\begin{cases} 100 \text{ (Non-Grading)} \\ 70 \text{ (Grading)} \end{cases}$

Note : Attempt *one* question from each Unit. All questions carry equal marks.

**Unit-I**

1. (a) Discuss the following terms ;
  - (i) Sensitivity
  - (ii) Linearity
  - (iii) Resolution
- (b) Discuss the working principle of Bolometer.

*Or*

2. (a) Explain the working of chopper type D. C. voltmeter.
- (b) Discuss the working principle of calorimeter.

**Unit-II**

3. (a) What is Electrostatic Deflection ? What do you understand by post deflection acceleration ?
- (b) Discuss the working of digital storage CRO.

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*Or*

4. (a) Discuss the different types of delay lines used in CRO.
- (b) Explain the working of Dual beam CRO.

**Unit-III**

5. (a) With the help of circuit diagram explain the working of Maxwell's inductance and capacitance bridge.
- (b) Discuss the working of linear variable differential transformer.

*Or*

6. (a) How is impedance measured using Q-meter ?
- (b) Explain the working of Nuclear Radiation Detector.

**Unit-IV**

7. With the help of a block diagram explain the working of spectrum analyser.

*Or*

8. With the help of block diagram explain the working of signal and function generator.

**Unit-V**

9. (a) Discuss the advantages of digital instruments over analog instruments.
- (b) Discuss the working of successive approximation type ADC.

*Or*

10. (a) Discuss the working of Binary ladder type DAC.
- (b) Explain the principle of operation of PLC structure.