Total No. of Questions :5] *[Total No. of Printed Pages : 2*

Roll No .....

EX-604

B.E. VI Semester

Examination, June 2016

Electronic Instrumentation

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each question are to be attempted at one place.

iii) All questions carry equal marks, out of which part A and B (Max. 50 words) carry 2 marks, part C (Max. 100 words) carry 3 marks, part D (Max. 400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

Unit - I

1. a) Write short note on electronic voltmeter.
   b) Explain three basic mode of operation of differential amplifier.
   c) Explain bolometer.
   d) Discuss various application of CRO with circuit diagram.

OR

Write down the working of vector impedance meter with the help of block diagram.

Unit - II

2. a) Write down the classification of transducer.
   b) Explain principle of strain gauge.
   c) Explain LUDT with diagram.
   d) Explain Maxwell's bridge for measurement of inductance.

OR

A capacitor is tested by Schering bridge. It forms one arm AB of bridge. The other arms are: AD - a non inductive resistance of 100 ohm, DC - a non reactive resistance of 300 ohm shunted by a capacitor of 0.5 μF. BC - a standard loss free capacitor of 100 μμF. The supply frequency is 50Hz. The bridge at balance with the above component. Find out capacitance and power factor of the capacitor under test.

Unit - III

3. a) Explain harmonic distortion analyzer.
   b) Explain the types of signal generator.
   c) Explain beat frequency oscillator.
   d) What is frequency selective wave analyzer.

OR

Explain Heterodyne wave analyzer.

Unit - IV

4. a) Write advantage of digital instrument over analog instrument.
   b) Explain digital pH meter.
   c) Explain LED (Light Emitting Diode) in details.
   d) Explain strip chart recorder.

OR

Explain X-Y recorder.

Unit - V

5. a) What is data acquisition system?
   b) Describe RS 232C interface.
   c) Explain working of network analyzer with the help of diagram.
   d) Explain D/A multiplexing in detail.

OR

Discuss the methods of measurement of uncertainty with help of circuit diagram.

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