

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

[2]

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 μ F. BC - a standard loss free capacitor of 100 μ F. 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

1. 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

- i. 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.
