Total No. of Questions : 8] *[Total No. of Printed Pages : 2*

Roll No .....

EX-6004 (CBGS)

B.E. VI Semester

Examination, May 2019

Choice Based Grading System (CBGS)

Electronic Instrumentation

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) What is electrostatic deflection? Explain the mechanism. Also what do you understand by post deflection acceleration and what is its need? Describe.
   b) Draw the block diagram of CRO and explain its working in detail.

2. a) Differentiate between dual trace and dual beam CRO in detail.
   b) What is the principle of working of the storage oscilloscope? Discuss its area of applications.

3. a) Draw the circuit of inductance-capacitance Maxwell's bridge. Derive the condition for balance. Also explain how unknown parameter are measured using this bridge.
   b) An AC bridge with terminals A, B, C, D (Consequently marked) has in arm AB, a pure resistance, arm BC a resistance of 800 Ω in parallel with a capacitor of 0.5μ, arm CD, a resistance of 400 Ω in series with a capacitor of 1.0 μ; and arm DA, a resistance of 1000 Ω
      i) Obtain the value of frequency for which the bridge can be balanced.

   ii) Calculate the value of resistance in arm AB to produce balance.

4. a) How a Q meter is used for impedance measurement? Explain.
   b) Draw circuit diagram of wien bridge. Derive the expression for determination of frequency.

5. a) Give classification of transducers. Define them with examples.
   b) Describe the construction and working of LVDT (linear variable differential transformer).

6. a) Draw the schematic diagram of signal generator and explain its function. http://www.rgpvonline.com
   b) Draw the block diagram and explain the working principle of the frequency generator.

7. a) List the various advantages of digital instruments over analog instruments.
   b) Explain the working of Ramp type digital Voltmeter.

8. Write short notes on any two of the following
   i) Strain gauge and gauge factor
   ii) Opto-electronic transducers
   iii) Wave analyzer
   iv) Spectrum analyzer
   v) Digital Multimeter
   vi) LED and LCD

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