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

Roll No .....

EC-3005-CBGS

B.E. III Semester

Examination, June 2020

Choice Based Grading System (CBGS)

Measurements and Instrumentation

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.
ii) All questions carry equal marks.
iii) Sketch neat diagram, if any.

1. a) Explain the principle of extending the range of AC ammeter. 7
   b) Define the following terms: 7
      i) Accuracy and Precision
      ii) Sensitivity
      iii) Bolometer
      iv) Hysteresis

2. a) Draw the block diagram of a CRO and explain briefly its vertical deflection system. 7
   b) Explain the measurement of inductance and capacitance using Maxwell's bridge. 7

3. a) What is Linear variable Differential Transformer? Explain its working. 7
   b) Explain strain gauge with its derivation. 7

4. a) Explain working of sweep frequency generator and pulse wave generator. 7
   b) Write short notes on : 7
      i) Beat frequency oscillator
      ii) LCD

5. a) Compare analog and digital instruments. 7
   b) Describe the working Digital voltmeters and multimeter. 7

6. a) Define rectifiers in terms of AC voltmeter and chopper type DC voltmeter. 7
   b) Describe different types of sweeps used in CRO. 7

7. a) Explain the working of Resistance Temperature Detector (RTD) and Thermistor. 7
   b) Explain the working of dual slope integrating type ADC with diagram. 7

8. Write short notes on the following: 14
   i) Piezo-electric transducer
   ii) Loading Effect
   iii) Optical transducers

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