

**EE-502 (GS)**  
**B.E. V Semester Examination, June 2020**  
**Grading System (GS)**  
**Electronics Instrumentation**  
**Time : Three Hours**

**Maximum Marks : 70**

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

1. With the help of neat sketch explain how a differential output can be taken from an Inductive transducer? How it is used for measurement of displacement.
2. Draw and explain following bridges.
  - a) Desauty's bridge
  - b) Heaviside Cambell's bridge
  - c) Universal bridge
3.
  - a) Discuss the principle working of LVDT.
  - b) Explain briefly about opto electronic transducers.
4. What are the difference between a dual trace and dual beam oscilloscope? Explain the working of Dual trace CRO with the help of its functional block diagram.
5.
  - a) Explain the AF sin and square wave function generator.
  - b) Explain about Heterodyne wave analyser.
6. Differentiate between Analog Data Acquisition system and Digital Data Acquisition system along with their advantages.

OR

- a) Explain the principle of sampling CRO.
  - b) Explain the working of storage CRO.
7. Write short notes on any two of the following:
  - a) Q meter and its applications
  - b) Harmonic distortion analyser
  - c) Spectrum analyser
8. Explain the following terms:(Any four)
  - a) Lissajous patterns
  - b) Active transducer
  - c) Advantages of Digital instruments
  - d) Accuracy and precision
  - e) Resolution and sensitivity
  - f) LCD
  - g) Q factor of a coil

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