

**B.Tech. - VIEP - ELECTRICAL ENGINEERING  
(BTELVI)**

**Term-End Examination**

**December, 2016**

**BIEE-019 : ELECTRICAL INSTRUMENTATION**

*Time : 3 hours*

*Maximum Marks : 70*

*Note : Attempt any five questions. All questions carry equal marks. Use of calculator is permitted. Missing data, if any, may be suitably assumed.*

1. Explain the following : 2×7=14
  - (a) Photoconductive Cell
  - (b) Photovoltaic Cell
  
2. Explain the principle of a piezoelectric transducer. List the advantages and disadvantages of piezoelectric transducers. 14
  
3. Describe in detail, the voltage telemetering system and current telemetering system. 14
  
4. What is a data acquisition system ? Draw the block diagram of a generalized data acquisition system and explain all the components. 14

5. Explain the basic components of a magnetic tape recorder for instrumentation applications. List its advantages and disadvantages. 14
6. Explain any *two* of the following : 2×7=14
- (a) Spectrum Analyzer
  - (b) Digital Tape Recorder
  - (c) PID Controllers
7. What are smart sensors ? Enumerate the applications of smart transmitters. 14
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