EE5A1

Reg. No. | | | | | | | | | | |

# Fifth Semester B.E. Degree Examination, July/August 2002

## Electrical & Electronics Engineering

## Electronic Instrumentation

Time: 3 hrs.] [Max.Marks : 100

**Note:** *Answer any FIVE full questions.*

1. (a) Explain statistical analysis of measurement data. (10 Marks)

   (b) What are the three general classes of errors? Explain. (10 Marks)

2. (a) With the help of a neat block diagram, explain the working of true RMS-responding voltmeter. (10 Marks)

   (b) With the help of a block diagram, explain the working of successive-approximation DVM. (10 Marks)

3. (a) Explain the working of a vector impedance meter using its block diagram. (10 Marks)

   (b) Explain different measurement methods with a Q-meter. (10 Marks)

4. (a) Explain gauge factor and gauge configuration with reference to strain gauges. (10 Marks)

   (b) Explain construction and working of LVDT. (10 Marks)

5. (a) Explain principle and working of resistance thermometers. (10 Marks)

   (b) Describe different types of photo sensitive devices. (10 Marks)

6. (a) Explain what is A/D and D/A conversion. (10 Marks)

   (b) Explain, what are spatial encoders. (10 Marks)

7. (a) Explain computer controlled measurement system for testing a radio receiver. (10 Marks)

   (b) Explain the working of an optical time domain reflectometer with the help of a block diagram. (10 Marks)

8. Write short notes on the following.
   a) Accuracy and Precision.
   b) Transducers.
   c) Digital Data Acquisition Systems.
   d) IEEE 488 Electrical interface. (4×5=20 Marks)

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