

**B.E. /B.TECH. (FULL TIME) DEGREE END SEMESTER EXAMINATION APRIL / MAY 2011
ELECTRONICS AND COMMUNICATION ENGINEERING BRANCH.**

FIFTH SEMESTER

EC375 - MEASUREMENT AND INSTRUMENTATION.

(REGULATIONS 2004)

Duration: 3 Hrs.

Max. Mark:100

Answer All Questions.

Part A

10 X 2 = 20 Marks.

1. Define Instrumentation.
2. Define error in measurement.
3. What is the difference between active and passive transducer?
4. What is a piezoelectric transducer?
5. What is a thermocouple?
6. Give the different types of strain gauges.
7. Define Accuracy.
8. What is a logic analyzer?
9. What is a Data logger?
10. What is virtual instrumentation?

Part B

5x16 =80 Marks

- 11(i). Briefly explain the IEEE 488 standard. (8)
- (ii). Write short notes on Digital data acquisition system. (8)
- 12(a)(i). With a neat functional block diagram explain the generalized measurement system (8)
- (ii). Explain its importance of calibration in standardizing an instrument. (8)

(OR)

P.T.O.

12(b). Briefly explain static and dynamic errors in measurement system. (16)

13(a)(i). Explain the working of capacitor microphone. (8)

- (ii). Write short notes on intelligent transducers. (8)

(OR)

13(b)(i). With a neat diagram explain the working principle of RVDT. (8)

(ii). Write short notes on IC sensors. (8)

14(a). With a neat block diagram explain the working of Digital multimeter. (16)

(OR)

14(b)(i) With a neat block diagram explain the working of wave analyzer. (8)

(ii) With a neat block diagram explain the working of spectrum analyzers. (8)

15(a). With a neat block diagram explain the working of Digital Storage Oscilloscope. (16)

(OR)

15(b)(i). Write short notes on analog and digital recorders. (8)

(ii). Briefly explain the application of virtual instrumentation in various fields. (8)
