Reg. No. ☐☐☐☐☐☐☐☐☐☐☐☐

## Question Paper Code : 21337

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2014.

Fifth Semester

Electronics and Communication Engineering

EI 1306 – MEASUREMENTS AND INSTRUMENTATION

(Regulation 2008)

Time : 3 hours                                                    Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1.  Draw the block diagram of a measurement system.

2.  Mention the advantages of Anderson bridge.

3.  What is an Electronic multimeter?

4.  What is a Q meter?

5.  What is a Function generator?

6.  What is a Wave analyzer?

7.  Compare analog and digital techniques.

8.  What is a measurement error?

9.  What is Multiplexing?

10. What is computer controlled instrumentation?

PART B — (5 × 16 = 80 marks)

11. (a)  Describe the Static and dynamic characteristics of a measurement system in detail.

Or

(b)  Illustrate and explain the (i) Maxwell's Inductance Bridge and (ii) Wien's bridge in detail.

12. (a) Describe the block schematic of Cathode ray oscilloscope with neat sketch. Mention its applications. (14+2)

Or

(b) Illustrate and describe the RF voltage and power measurements in detail.

13. (a) With neat sketch, describe in detail the RF signal generators.

Or

(b) Illustrate and describe in detail the Spectrum analyzer.

14. (a) Explain in detail about Digital voltmeter with neat sketch.

Or

(b) Describe in detail the measurement of frequency and time interval with neat sketches.

15. (a) Describe with neat illustrations the IEEE 488 bus in detail.

Or

(b) Explain with a neat sketch, the optical time domain reflectometer in detail.

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