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

Question Paper Code : 61370

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2014.

Fifth Semester

Electronics and Communication Engineering

EI 1306 — MEASUREMENTS AND INSTRUMENTATION

(Regulation 2008)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define Q-Factor of a Coil.
2. What is mean by Working Standards?
3. What is Q–Meter? and State the Principle of it.
4. Write about the deflection sensitivity of CRO.
5. Define Wave Analyzer.
6. What is mean by Signal Generator?
7. What is mean by Quantization?
8. Draw the basic circuit diagram of a Digital frequency meter.
9. State the various Characteristics of Signal Amplifier.
10. What are the different Hand shake signals in GPIB?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain in detail about the Various Static characteristics of an Measuring Instrument. (8)

(ii) Explain the different errors that occur in Measuring Instrument. (8)

Or

(b) (i) With neat diagram Explain the working of Moving Coil Meter. (8)

(ii) Explain how the unknown Capacitance can be measured by using Schering Bridge. (8)

12. (a) Draw the block Diagram of CRO and explain in detail about each block.

Or

(b) Explain about Electronic Multimeter with Circuit Diagram.

13. (a) Explain in detail about Heterodyne Wave Analyzer.

Or

(b) (i) Draw and Explain the block diagram of Simple RF signal Generator. (8)

(ii) Explain about Sweep Generator with the help of Block diagram. (8)

14. (a) (i) Explain Various Techniques of Extending the frequency range of Frequency meter for High Frequency Measurements. (8)

(ii) Write short notes about Ramp Type Digital Voltmeter. (8)

Or

(b) Explain the Frequency Counter with neat sketch. With the help of Timing Diagram explain its operation.

15. (a) Discuss in detail about Fiber Optic instruments used for measurement of power and system Loss.

Or

(b) Explain about interfacing of Transducers in real time Applications.
