LIB
16/11/13 AN

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

Question Paper Code : 33450

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2013.

Fourth Semester

Electronics and Instrumentation Engineering

EI 1253/EI 1302 A — ELECTRONIC INSTRUMENTATION

(Regulation 2004/2007)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is Vector voltmeter?

2. Mention the application of true RMS meter.

3. What is frequency synthesized sine wave generator?

4. Write the merits of harmonic distortion analyzer.

5. Mention the various parts of CRO.

6. Write the advantages of digital CRO.

7. Mention the types of digital voltmeter.

8. Compare between digital and analog multimeters.

9. What is electrostatic interference?

10. Mention the applications of Bar graph display.

PART B — (5 × 16 = 80 marks)

11. (a) Describe the principle and construction of moving iron instrument with a neat diagram and discuss the merits and demerits. (16)

Or

(b) Explain the principle and working of vector impedance meter with a neat diagram and also mention the applications. (16)

12. (a) (i) Describe the sine wave generator with a diagram. (8)

(ii) Explain the sweep frequency generator with a neat diagram in detail. (8)

Or

(b) (i) Discuss the wave analyzer with a neat diagram. (8)

(ii) Explain the spectrum analyzer with a neat diagram. (8)

13. (a) Describe the general purpose oscilloscope with neat sketch and mention the applications, merits and demerits. (16)

Or

(b) (i) Explain in detail the storage oscilloscope. (8)

(ii) Discuss the sampling oscilloscope and mention the applications. (8)

14. (a) Describe the digital method of measuring frequency with necessary diagram and mention the merits and demerits with application. (16)

Or

(b) Explain any one type of digital multimeter with necessary sketch. Also mention the advantages, disadvantages and applications.

15. (a) (i) Describe the principle and working of seven segmental display with a neat diagram. (8)

(ii) Explain X – Y recorder with a neat diagram. (8)

Or

(b) Write short notes on:

(i) Electromagnetic interference (6)

(ii) Data loggers (5)

(iii) Earth loops. (5)