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Question Paper Code : 11336

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2011

Sixth Semester

Electronics and Communication Engineering

EI 2351 — MODERN ELECTRONIC INSTRUMENTATION

(Common to Instrumentation and Control Engineering)

(Regulation 2008)

Time : Three hours

Maximum : 100 marks

Answer ALL questions

PART A — (10 × 2 = 20 marks)

1. Draw the current to voltage converter of a digital multimeter.
2. What is automatic ranging in digital instruments?
3. What is the use of aquadag in a CRO?
4. State the applications of an X-Y recorder.
5. What are the functions of a network layer?
6. What is the use of a serial interface converter?
7. Compare the virtual instruments with standard instruments.
8. How will you create a sub VI from a VI?
9. State the basic requirements of DAQ cards used in VI applications.
10. Name the DAQ modules used in serial communication.

PART B — (5 × 16 = 80 marks)

11. (a) With neat diagrams, explain the operation of any two types of digital voltmeters. (16)

Or

- (b) (i) Give a detailed account of digital frequency meters. (10)
(ii) Explain the working of digital IC meter. (6)
12. (a) (i) Explain the operation of a storage CRO with necessary diagrams. (10)
(ii) Write a detailed note on data loggers. (6)

Or

- (b) Give a detailed account of seven segment and dot matrix display. (16)
13. (a) Explain the different layers of OSI model and their functions in detail. (16)

Or

- (b) Explain what do you mean by EIA 422 interface standard and enumerate its advantages over other interface standards. (16)
14. (a) Explain in detail about the architecture of virtual instruments with the block diagrams. (16)

Or

- (b) What are the various VI programming techniques? Explain in detail. (16)
15. (a) (i) Explain the design of digital voltmeters with transducer inputs in detail. (10)
(ii) Discuss how DNQ modules with serial communication are used in VI applications. (6)

Or

- (b) Design an ON/OFF controller for temperature control applications based on VI. (16)
