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Question Paper Code: 36601

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2018

Sixth Semester

Instrumentation and Control Engineering

01UIC601 - MODERN ELECTRONIC INSTRUMENTATION

(Common to Electronics and Instrumentation Engineering)

(Regulation 2013)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. What are the general characteristics of digital voltmeter?

2. Classify of digital voltmeters.

3. Analyze the purpose of blanking circuit in cathode ray oscilloscope.

4. List the various controls on the front panel of a signal generator.

5. Compare RS 422 and RS 485.

6. State the advantages of RS 485 interface.

7. Define the term flexibility in Virtual Instrumentation.

8. Define virtual instrumentation.

9. Illustrate the major components of pc based data acquisition system with block diagram?

10. What is the need for DAQ?

PART - B (5 x 16 = 80 Marks)

11. (a) With a neat diagram explain in detail about successive approximation type DVM.
    (16)

Or

(b) Describe the operation of a microprocessor based digital multimeter with auto ranging and self diagnostic features, with necessary diagram. (16)

12. (a) Describe with diagram the operation of a sampling CRO. (16)

Or

(b) Explain the operation of a data logger with block diagram. State the functions of each block. (16)

13. (a) Describe the functions of seven layers of ISO/OSI model. (16)

Or

(b) What are the serial interfaces available? Explain any one of them. (16)

14. (a) Illustrate the architecture of a virtual instrumentation system with a neat block diagram. (16)

Or

(b) Explain different types of loops used in Lab VIEW. (16)

15. (a) Explain with a neat VI diagram how temperature is controlled? Use appropriate DAQ cards for obtaining real time data. (16)

Or

(b) With neat sketch, explain in detail about hardware and software description of DAQ cards for VI application. (16)

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