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

Question Paper Code: 36601

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

Sixth Semester

Instrumentation and Control Engineering

01UIC601 - MODERN ELECTRONIC INSTRUMENTATION

(Common to Electronics and Instrumentation Engineering)

(Regulation 2013)

Duration: 1.15 hrs Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. The principle of voltage to time conversion is used in

   (a) dual slope type DVM

   (b) successive approximation type DVM

   (c) integrating type DVM

   (d) none of these

2. A time base selector basically consists of

   (a) LC oscillator (b) RC oscillator

   (c) Crystal oscillator (d) Wien bridge oscillator

3. Q factor is defined as

   (a) reactance/resistance (b) resistance/reactance

   (c) resistance/impedance (d) impedance/resistance

4. A dual beam CRO uses

   (a) electronic switch (b) two electron guns

   (c) one electron gun (d) two time base generator circuits

5. Maximum Distance of EIA 422 has

(a) 1000 metres (b) 2000 metres
(c) 4500 metres (d) 1500 metres

6. The number of bits transmitted or received per second is defined as

(a) Transmission rate (b) Reception rate
(c) Transceiver rate (d) Baud rate

7. Lab VIEW follows _____ type of program execution method.

(a) Top down approach (b) Left to right approach
(c) Bottom up approach (d) Sequential approach

8. The string function in Lab VIEW can be represented with the following colour coding

(a) Orange (b) Blue (c) Pink (d) Green

9. Identify the resolution of a 12-bit data converter?

(a) 0.00024% (b) 0.0041% (c) 0.024% (d) 0.41%

10. ADC can be considered as a

(a) decoding device (b) encoding device
(c) multiplexer (d) summing amplifier

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. Describe briefly with neat diagrams the working of the ramp type DVM and dual slope integrating type DVM. (8)

12. Describe in detail about the different methods of magnetic tape recording. (8)

13. Describe the functions of seven layers of ISO/OSI model. (8)

14. Define virtual Instrumentation. Draw the block diagram of virtual instrumentation and compare it with traditional instrument. (8)

15. With neat sketch, explain in detail about hardware and software description of DAQ cards for VI application. (8)