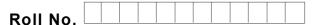


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Total No. of Pages : 02

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B.Tech.(EE) (2012 Onwards E-III) (Sem.-7,8) B.Tech.(Electrical & Electronics) (2012 Batch E-III) VIRTUAL INSTRUMENTATION Subject Code : BTEE-805C M.Code : 71944

Time: 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

- 1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
- 2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
- 3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

SECTION-A

1. Write briefly :

- (a) Why Sub VIs form important part of Virtual Instrumentation and how are they saved?
- (b) What are controls and indicators in a VI?
- (c) What are the major components of PC based data acquisition system?
- (d) What is the use of waveform generator for real time control processes in VI?
- (e) What are the common applications of strings?
- (f) Is signal conditioning needed while dealing with signals in VI? Justify.
- (g) What is polymorphism in a VI?
- (h) What is the use of shift registers in a VI?
- (i) What is hard ware triggering in a DAQ system of VI?
- (j) What is the use of clusters in VI?



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SECTION-B

2. Write short notes on :

(a) PXI

- (b) SCXI
- 3. Create a VI to find determinant of a 2x2matrix.
- 4. Explain the use of following tabs of devices and interfaces for configuring a DAQ device
 - (a) System
 - (b) Base I/O Address
 - (c) DMA
- 5. Build a VI that uses formula node to calculate the following equations:

$$Y1 = x^3 + x^2 + 5$$
$$Y2 = (m^*x) + b$$

6. Explain with a suitable example how parallel loops are controlled in Lab VIEW?

- 7. Explain how serial communication is achieved in VI?
- 8. How analog input devices are configured for specified set of channels with DAQ in VI. Explain by considering A1 read and AI start.
- 9. Create a VI to read a temperature data from a thermocouple by creating a look up table of voltages and temperature equivalent.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.

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