

Roll No.

Total No. of Pages : 02

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**B.Tech.(EE) (2011 Onwards E-III)  
B.Tech.(Electrical & Electronics) (2011 & 2012 Batch E-III)  
(Sem.-7,8)**

**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) How Lab VIEW differs from text based programming languages?
- (b) Lab VIEW follows a data flow model for running Vis. Explain with an example.
- (c) What is the role of DAQ software in PC based measurement system?
- (d) Differentiate array from a cluster.
- (e) When are event structures used in a VI?
- (f) What are the advantages and disadvantages of using global variables in a VI?
- (g) Name the DAQ modules used in serial communication.
- (h) Define the term 'Signal Conditioning' and its role in DAQ-VI system?
- (i) What is 'Error Handling' in VI? How it is achieved in any VI program?
- (j) Define the term 'Open System Interconnection'?

**SECTION-B**

2. Explain in detail about the architecture of PCMCIA with its applications.
3. Build a VI to find the square root of a given number.
4. Explain how serial and parallel loops are controlled in Lab VIEW with a suitable example?
5. Explain in detail distributed monitoring and control devices used in real time analysis in VI.
6. Explain GPIB communication, configuration and addressing.

**SECTION-C**

7. Write short notes on :
  - (a) RS485
  - (b) Transmission control Protocol
8. Discuss how DAQ modules with serial communication are used in VI applications.
9. Build a VI which consist of numeric input array Set the threshold as '10' and separate the numbers which are greater than threshold. Create an icon and connector and save this VI as sub VI.

**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.**