CBCS SCHEME

USN | | | | | | | | | | |

18MT53

Fifth Semester B.E. Degree Examination, Jan./Feb. 2021
Virtual Instrumentation

Time: 3 hrs. Max. Marks: 100

Note: ***Answer any FIVE full questions, choosing ONE full question from each module.***

Module-1

1 a. Define VI. Explain the architecture of VI. **(12 Marks)**
b. Describe the advantages of Labriew. **(04 Marks)**
c. Write the applications of Labview. **(04 Marks)**

OR

2 a. Define sampling. Explain two operation of sample and hold circuit with required diagrams. **(10 Marks)**
b. Compare text based programming and graphical programming. **(05 Marks)**
c. Write short notes on multiplexing analog inputs. **(05 Marks)**

Module-2

3 a. Write a short notes on the following :
i) Counter ii) Timer iii) Digital I/O. **(10 Marks)**
b. Define DAQ. And mention the advantages and disadvantages of DAQ. **(10 Marks)**

OR

4 a. Explain working of analog to digital converter with relevant diagram. **(10 Marks)**
b. Explain the different types of buses used in DAQ. **(10 Marks)**

Module-3

5 a. Explain the operation for the following :
i) For loop ii) While loop **(10 Marks)**
b. Explain VI front panel with labeled diagram. **(10 Marks)**

OR

6 a. Define a structure. Explain the different types of structures with suitable diagram. **(12 Marks)**
b. Define an array. Explain the functions of array. **(08 Marks)**

Module-4

7 a. Compare RS232, RS422 and RS485. **(06 Marks)**
b. Mention some examples for parallel and serial interface and explain briefly. **(06 Marks)**
c. Explain CAN Bus is detail. **(08 Marks)**

OR

8 a. Explain interfacing of external instrument PC using RS232. **(10 Marks)**
b. Write a brief description on USB and its advantages. **(10 Marks)**

Module-5

9 a. Explain the design of PID controller. **(10 Marks)**
b. Write notes on : i) Fourier transfers ii) Power spectrum. **(10 Marks)**

OR

10 a. Explain Generation of HTM page. **(06 Marks)**
b. Explain the concept of windowing. **(06 Marks)**
c. Explain the operation of ON/OFF controller along with the joint panel of the temperature controller. **(08 Marks)**

* * * * *