



CBCS SCHEME

4

15MT52

Fifth Semester B.E. Degree Examination, Dec.2019/Jan.2020 Virtual Instrumentation

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. Define Virtual Instrumentation and design the architecture of VI with neat diagram. (08 Marks)
b. Differentiate Graphical and Textual Programming. (08 Marks)

OR

- 2 a. Summarize PC based Data Acquisition System. (10 Marks)
b. Describe advantages of VI. (06 Marks)

Module-2

- 3 a. Explain Counters and Timers in Data Acquisition system. (08 Marks)
b. Define Sample and hold circuit. (08 Marks)

OR

- 4 a. What are the methods of software and hardware installation in VI? (08 Marks)
b. With neat diagram, explain Dual slope ADC technique. (08 Marks)

Module-3

- 5 a. What is meant by Looping in labview and classify the loops? (08 Marks)
b. Mention structure in Labview and distinguish Case and Sequence structure. (08 Marks)

OR

- 6 a. Define the basics of file – i/p/o/p system. (08 Marks)
b. Define Sub VI – Create ad VI to compute full adder using sub VI technology. (08 Marks)

Module-4

- 7 a. Draw and explain ISO / OSI model for serial bus. (08 Marks)
b. Explain RS232 interfacing in detail, with neat diagram. (08 Marks)

OR

- 8 a. Explain MODBUS in detail. (08 Marks)
b. Explain IEEE 488 / GP IB standard with neat diagram. (08 Marks)

Module-5

- 9 a. Design a second order system using Labview software. (08 Marks)
b. Describe Built in self Test using PID. (08 Marks)

OR

- 10 a. Explain Fourier Transform and Correlation function. (08 Marks)
b. Write short notes on : (08 Marks)
i) ON OFF Controller ii) Windowing and Filtering tools.

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.