

--	--	--	--	--	--	--	--	--	--

Eighth Semester B.E. Degree Examination, Dec.2018/Jan.2019

Virtual Instrumentation

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting at least TWO questions from each part.

PART – A

- 1 a. What is sampling? Explain the function of sample and hold operation. (10 Marks)
- b. Explain the working of digital to analog conversion briefly. (10 Marks)
- 2 a. Explain the concept of Measurement and Automation Explorer (MAX) using Labview. (10 Marks)
- b. Explain the working operation of DAQ Assistant used in virtual instrumentation. (10 Marks)
- 3 a. Explain different strategies for sampling of multichannel analog inputs. (10 Marks)
- b. Explain the following: (10 Marks)
 - i) Timers
 - ii) Counters
- 4 a. Explain the function of RS-232 and USB standards used in virtual instrument for communication. (10 Marks)
- b. Explain the concept of working GPIB devices in virtual instrumentation. (10 Marks)

PART – B

- 5 a. Explain the following function of labview: (10 Marks)
 - i) For loop
 - ii) While loop
- b. What is virtual instrumentation? Explain different part of virtual instrumentation. (10 Marks)
- 6 a. Explain the following function of labview: (10 Marks)
 - i) Case structures
 - ii) Sequence structures
- b. Define array. Explain the operation of 2 dimensional array and 3 dimensional array. (10 Marks)
- 7 a. Write a labview program to perform Fourier transform for power spectrum. (10 Marks)
- b. Write a program for ON/OFF controller using labview. (10 Marks)
- 8 a. Write a labview program for CRO simulation using graph indicator, function and controls. (10 Marks)
- b. Write a program for filtering any signal using labview. (10 Marks)

* * * * *