

USN

17MT52

Fifth Semester B.E. Degree Examination, Aug./Sept.2020 Virtual Instrumentation

Time: 3 hrs. Max. Marks: 100

	3			
	N	ote: Answer any FIVE full questions, choosing ONE full question from each mo	dule.	
		Module-1		
1				
			(10 Marks)	
	b.	Explain Virtual Instrumentation with neat block diagram.	(10 Marks)	
		OR		
2	0	Explain the process involved in NI – MAX, with an example.	(10 Marks)	
2	a. b.	Explain the process involved in M = MAX, with an example. Explain the concept of universal data acquisition system.	(06 Marks)	
	C.	Write short note on: i) Resolution ii) Multiplexing.	(04 Marks)	
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		Module-2		
3	a.	Define Sampling. Explain the process of sampling theorem.	(10 Marks)	
	b.	Explain the working operation of digital to Analog converter, with neat diagram.	(10 Marks)	
		OR		
4	a.	Explain the concept of DNA.	(06 Marks)	
	b.	Explain the concepts of timers and counters in Virtual Instrumentation.	(10 Marks)	
	C.	Write a short note on: i) Calibration ii) Accuracy.	(04 Marks)	
		Module-3		
5	0	Explain Labview. Explain the three important components of Labview.	(10 Marks)	
3	a. b.	Explain the concepts of sub Virtual Instrumentation I with example.	(06 Marks)	
	C.	Write a short note on: i) Formula node ii) Flat sequence.	(04 Marks)	
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	£	OR	(10.75 1.)	
6	a.	Define Array. Explain any four Array functions.	(10 Marks)	
	b.	Analyse the working operation of file input / output system with example.	(10 Marks)	
		Module-4		
7	a.	G : 1 . DG 222 DG 422 -1 DG 405 and LICD	(10 Marks)	
	b.	11 11	(10 Marks)	
0		OR Explain the architecture of IEEE – 488 bus system, with neat diagram.	(10 Marks)	
8	a.	Explain the architecture of IEEE – 488 bus system, with heat diagram.	(10 Marks)	
	b.	Explain the alchitecture of CAIV controller, with heat diagram.	(201.484.455)	
		Module-5		
9	a.	Write a short note on : i) Fourier transform ii) Power spectrum iii) Corre	elation	

9	a.	Write a short note on: i) Fourier transform ii) Power spectrum	iii)	Correlation
		iv) Windowing and Filtering.		(10 Marks)
	b.	Design and implement CRO simulation using Labview.		(10 Marks)

OR

a. Design and implement temperature monitoring system using Labview. (10 Marks)
 b. Design and implement simple second order system using Labview. (10 Marks)

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