Reg. No.



**ANIPAL INSTITUTE OF TECHNOLOGY** MANIPAL

A Constituent Institution of Manipal University

## SECOND SEMESTER M.TECH.

## **END SEMESTER EXAMINATIONS, APRIL/MAY 2017**

## SUBJECT: VIRTUAL INSTRUMENTATION [ICE 5262]

Time: 3 Hours

## MAX. MARKS: 50

	Instructions to Candidates:	
	✤ Answer ALL the questions.	
	<ul> <li>Missing data may be suitably assumed.</li> </ul>	
1A.	Describe graphical system design model in detail. Also discuss its advantages.	5
1B.	What is the use of shift register? Explain the stacking of shift register with an example.	3
1C.	Distinguish conventional and virtual instruments.	2
2A.	Explain any 5 array functions available in LabVIEW.	5
2B.	What is an error cluster? With an example explain the use of it.	3
2C.	What is auto indexing explain with an example.	2
3A.	Enumerate case structures and sequence structures with an application.	5
3B.	When are the following files used? (i) text files, (ii) binary files and (iii) data log files	3
3C.	What is polymorphism? Write the content of C for the given front panel and block diagram in Fig. Q3C (a) & (b) respectively.	2



Describe serial peripheral interface bus with necessary diagram. 4A.

<b>4B.</b>	Summarize any 3 commonly used transducers and their signal conditioning	3
4C.	requirements. Discuss about source and measurement grounding.	2
<b>5</b> A	With block diagram of CDD evaluin its working and list the advantages and	_

- With block diagram of GPIB explain its working and list the advantages and 5 5A. disadvantages. 3
- Describe interchangeable virtual instruments and their benefits. 5B.
- 5C. Explain the operation of edge detection related to Machine vision

5

2