CT 302 - Computer Architecture & Organization

P. Pages : 1 **GUG/W/16/3706**

Time : Three Hours ‖‖‖‖‖‖‖ *3603* Max. Marks : 80

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Notes : 1. All questions carry equal marks.
2. Illustrate your answers wherever necessary with the help of neat sketches.
3. Due credit will be given to neatness and adequate dimensions.
4. Assume suitable data wherever necessary.

1.	a)	Explain 3-bus structure with the help of diagram.	**8**
	b)	Write a note on Distributed computing.	**8**

OR

2.	a)	Explain Addressing modes.	**8**
	b)	What are the operations of main memory explain.	**8**

3.	a)	Write a note on 'Array processors'.	**8**
	b)	Compare lossely coupled and tightly coupled systems.	**8**

OR

4.	a)	Explain execution of a complete instruction, Write and explain control sequence for execution of the instruction ADD(R3), R1.	**8**
	b)	Write short note on "I/O Devices".	**8**

5.	a)	Explain the types of microinstructions available.	**8**
	b)	What is Bit slicing? Explain with example.	**8**

OR

6.	a)	Differentiate between Hardwired & Microprogrammed computer.	**8**
	b)	Giving example of field encoded micro-instruction. Explain why grouping of control signals are required.	**8**

7.	a)	Explain with an example how to multiply two unsigned binary numbers.	**8**
	b)	Write a short note on carry look ahead or fast adder Addition.	**8**

OR

8.	a)	Write a note on "Arithmatic operations on floating point numbers".	**8**
	b)	Explain 'Booth's algorithm for multiplication & apply it to multiply (-13) and (+12).	**8**

9.	a)	Explain memory Inter leaving in detail.	**8**
	b)	What is cache memory? Explain working of cache memory.	**8**

OR

10.	a)	Explain virtual memory Address translation.	**8**
	b)	What is need of memory management? Explain memory management techniques in brief.	**8**

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