

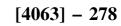
T.E. (E &TC) (Semester – II) Examination, 2011 COMPUTER ORGANISATION AND ARCHITECTURE (2008 Pattern) (New)

Time: 3 Hours Max. Marks: 100

		SECTION – I	
1.	a)	Explain the operation of sequential circuit binary multiplier with	
		Multiplicand 1101	
		Multiplier 1011.	8
	b)	Using Booth's algorithm multiply	
		Multiplicand = -13	
		Multiplier = + 11 OR	8
2.	a)	Explain following addressing modes with example	
		1) Indirect mode	
		2) Index mode	
		3) Relative mode.	6
	b)	Carry out bit pair recoding of following multipliers	
		1 1 0 1 0	
		0 1 1 0 1	4
	c)	Represent (178.1875) in single precision floating point format.	6
3.	a)	Explain with neat block diagram single bus organisation.	9
	b)	Using input output gating for the registers in single bus organisation explain operation of	
		1) Fetching a word from memory	
		2) Storing a word in memory.	9
		OR	



4.	a)	Draw neat block diagram of three bus organisation of data path inside the processor and hence explain the control sequence for instruction Add R4, R5, R6.	9
	b)	What is microprogrammed control? Using single bus organisation write control sequence for execution of instruction Add (R3), R1. Write microinstructions for the same.	9
5.	a)	Explain how multiple interrupt requests can be handled using	
		1) Vectored Interrupt	
		2) Using individual interrupt request and acknowledge lines.	6
	b)	Explain use of PCI bus in computer system. Also explain data transfer signals on PCI bus.	10
		OR	
6.	a)	Write notes on: 1) USB	2
		2) Cache Memory. SECTION – II	16
7.	a)	Explain 8086 architecture.	8
	b)	With suitable example explain difference between rotate and shift instructions.	4
	c)	Explain with suitable example how physical address of operand is calculated in 8086.	4
		OR	
8.	a)	Explain interrupt vector table of 8086.	8
	b)	Explain string instructions of 8086.	8
9.	a)	Explain flag register of 80386.	8
	b)	Explain memory paging mechanism in 80386.	8
		OR	
10.	a)	Explain segment descriptor in detail.	8
	b)	Explain the use of various registers in 80386.	8



11.	a)	What is the difference between loosely coupled and tightly coupled multiprocessor system?	6
	b)	Compare RISC and CISC.	6
	c)	Explain pipelining mechanism of RISC processor.	6
		OR	
12.	a)	List and explain various registers in ARM core. What are different modes of operation in ARM?	5
	b)	Explain superscalar processor architectures.	8
	c)	Explain role of Barrel shifter in ARM core data flow model.	5

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