GANPAT UNIVERSITY B. Tech. Sem. V (EC) Regular Examination Nov/Dec 2012 2 EC 504: Computer Organization [MAX. Marks: 70]

MAX. Time: 3 Hrs.] Instructions:

- 1. Attempt all questions.
 - 2. Answers to the two sections must be written in separate answer books.
 - 3. Figures to the right indicate full marks.
- 4. Assume suitable data, if necessary.

Section: I

0.1(.)	Draw and explain wilkes microprogram control unit.	(5)
Q:1(a)	What is Infiband? Give its advantages and explain its architecture.	(5)
(b)	Write the micro operations which are performed in given cycle.	(2)
(c)	Write the micro operations which are performed in given cycle.	(-)
	(i) Indirect Cycle (ii) Interrupt Cycle	
	OR I with with	(5)
Q:1 (a)	Explain the function of micro-programmed control unit with	(5)
	diagram.	(15)
(b)	Explain firewire serial bus and give its advantages.	(5)
(c)	Write the micro operations which are performed in given cycle.	(2)
Charles 1	(i) Fetch Cycle (ii) Execute Cycle : ADD R1, X	
Q:2 (a)	Draw and explain the program execution for the following with all	(5)
£ ()	required steps and show the content of IR, PC and AC at every	
	step. Initially PC is at 400H.	
	Memory contains	
	1860H at address 400 H, 4861H at address 401 H, 2860H at address 402 H	
	Data:	
	0005H at address 860 H, 0003H at address 861 H	
	Reference opcode: 0001H: Load AC from memory,0010H: Store AC from memory,0100H: Add AC & memory	
(b)	- it is a second to the second	(5)
(u)	figures.	
(2)	I is a second I/O and Isolated I/O	(2)
(c)	OR OR	
		(5)
Q:2 (a)	Write a short note on interrupts.	(5)
(b)	Write a short note on SPARC.	(2)
(c)	Drew basic block diagram of external device.	(5)
Q:3 (a)		(5)
	2-stage and 4-stage pipelining.	(4)
(b)		(4)
-	with an example.	(2)
(c)	Give the difference between hardware poll and software poll.	(2)

Section: II

0.4	(a)	Explain the method of Direct mapping for accessing data from	(5)
		cache memory	(5)
	(b)	List different types of RAM & explain with figure. Also give	(3)
		difference between them.	(2)
	(c)	What is the general relationship between access time, memory,	()
		cost and capacity?	
		OR the second state of the	(5)
Q.4	(a)	Explain the method of Associative mapping for accessing data	(.)
		from cache memory.	(5)
	(b)	List Various types of ROM and explain any four types.	(2)
	(c)	Explain write policy with reference to memory. Why we use glass as a substrate in Magnetic Disk? Draw and	(5)
Q.5	(a)	Explain the Read and Write mechanism for magnetic disk.	
		Draw and explain virtual Memory Organization and Virtual	(5)
	(b)	Draw and explain virtual wemory organization	
		Memory Address Translation. What is the decimal value of this double precision float?	(2)
	(c)		
		0 1 0 0 0 1 0 1 0 1 0 1 0	
		OR	
Q.5	(a)	Explain CD-ROM and its Block format.	(5)
×	(b)	Explain Floating point Representation and convert -0.8123 to	(5)
	(~)	binary in single and double precision.	(2)
	(c)	Why memory management is required?	(2)
Q.6		Draw and explain expanded structure of IAS computer in detail	(5)
	(b)	Compare RISC and CISC characteristics.	(4)
	(c)	the sum of	(2)
	COM	bus.	
		(b) Explain structure and indedon of some an po	

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