

EC09 405 Computer Organization and Architecture- Question Bank | 2013-14

	Write the instruction format for indirect addressing mode and register addressing mode	5	Jun 08	2004
	Explain the steps involved in the program execution	5	Jun 11	2009
Data path design (fixed point and floating point arithmetic, ALU, pipeline processing)	Convert the number 2741 to hexadecimal, octal, binary and BCD representations	5 5	Dec 07 Dec 08	2004 2004
	Explain briefly about Data representation	5	Dec 08	2004
	Using IEEE single precision floating point numbers compute the following i) 32×16 ii) $147.5 + 0.25$	5	Jun 08	2004
	Explain in detail about fixed point arithmetic and floating point arithmetic	5	Apr 13	2009
	Design data path to implement normalize instruction on 32 bit floating point data with 8 bit exponent 21 bit sign magnitude mantissa and hexadecimal base. Clearly state the assumptions if there are any for the design	15	Jun 09	2004
	Mention the general rules for addition and subtraction of floating point numbers	5	Jun 08	2004
	Give formal proof of correctness of padding bits for the arithmetic shift operation on negative numbers expressed in 1's and 2's complement notation	5	Jun 09	2004
	Design an array of cells intended to implement 2's complement combinational array multiplier using Booth algorithm. Give the cell details and the array structure showing input and output signals. Assume 1 bit multiplier and multiplicand	15	Jun 09	2004
	Explain the working of a pipelined multiplier	15	Dec 10	2004
	Explain the floating point division algorithm with flow chart	15 15	Dec 07 Jun 08	2004 2004
	Design the logic circuit for the correction step of the non restoring division method. Note the behavior with proper explanation of steps and terminologies used.	15	Jun 09	2004
	Give the RTL description of the restoring and non restoring division schemes with suitable illustrations	5	Jun 09	2004
	Briefly explain the design of four bit ALU	5	Dec 07	2004
	Explain about Arithmetic and Logic unit	5 15	Dec 08 Jun 08	2004 2004
	Explain in detail about i) combinational ALU and ii) sequential ALU	10	Jun 11	2009
	Describe in detail the sequential design of ALU	15	Dec 08	2004

Control design <i>(Hard wired control, micro programmed control, pipeline control)</i>	Write a short note on hard wired control	5 5 2	Dec 07 Dec 08 Apr 13	2004 2004 2009
	Describe in detail micro program control. What are the advantages and disadvantages?	15 15	Dec 07 Dec 08	2004 2004
	Microprogrammed control is not suitable for RISC architecture. Justify the validity or otherwise of the statement	5	Jun 09	2004
	Explain with the timing diagram the four phase of a microinstruction	5	Dec10	2004
	Evolve a suitable hardware architecture to implement dynamic microprogramming using a write able control store	5	Jun 09	2004
	Design a microprogrammed and also hardwired control unit for ... multiplication scheme. Give the data path and control path with binary listing of the microprogram. Use resource encoding for the control field in microprogrammed controller	15	Jun 09	2004
	Explain the basic structure of a micro programmed control unit	15	15	Dec10

