Code No: G0502/R13

M. Tech. I Semester Supplementary Examinations, JAN/FEB-2018

COMPUTER ORGANIZATION AND ARCHITECTURE/ COMPUTER ORGANIZATION

Common to Computer Science(05) and Computer Science & Engineering (58)

Time: 3 Hours **Max. Marks: 60**

Answer any FIVE Questions
All Questions Carry Equal Marks

1.	a	Discuss about the error detection using parity bit code with examples	8M
	b	Find 2's complement of the following i) 10010 ii) 111000 iii) 0101010 iv) 111111	4M
2.	a	What is RTL? Explain with suitable examples? What is its significance Instructions?	7M
	b	Discuss the use of following Registers i. MAR ii. MDR iii. IR iv. PC v. AC	5M
3.	a	Discuss about parallel priority interrupt	6M
	b	Draw the circuit of a BCD adder / subtractor and explain its operations	6M
4.	a	Explain Division algorithm with example.	6M
	b	Compare and contrast between Asynchronous DRAM and Synchronous DRAM	6M
5.	a	Explain the characteristics of multiprocessors, Encoders & Decoders	6M
	b	With an example explain how BCD addition is performed	6M
6.	a	What is an Interrupt? Explain about different types of Interrupts.	6M
	b	Explain I/O Processor with a neat diagram	6M
7.	a	Perform the arithmetic operations 35 + 40 and - 35 + (- 40) with binary numbers in singed 2's complement representation and signed- magnitude representation	6M
	b	Explain the operation of DMA controller with a neat diagram.	6M
8.	a	Explain how to access I/O devices in a system	6M
	b	Multiple $(-7)_{10}$ with $(3)_{10}$ by using Booth's multiplication. Give the flow table of the multiplication	6M

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