Printed page: .... **Subject Code: ACSBS 0303**

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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

Course: B.Tech **Branch: CSBS**

(SEM III SESSIONAL EXAMINATION –II) (2021-2022)

Computer Organization and Architecture(ACSBS-0303)

Time: 1.15 Hours **SET-B** **Max. Marks:30**

General Instructions:

- This Question paper consists of ...2...pages & ...5...questions. It comprises of three Sections, A, B, and C
- Section A -Question No- 1 is objective type questions carrying 1 mark each, Question No- 2 is very short answer type carrying 2 mark each. You are expected to answer them as directed.
- Section B - Question No-3 is Short answer type questions carrying 5 marks each. Attempt any two out of three questions given.
- Section C -Question No. 4 &5are Long answer type (within unit choice) questions carrying 6marks each. Attempt any one part *a* or *b*.

		SECTION – A	**[8]**	
1.		**All questions are compulsory.**	**(4×1=4)**	**CO 2**
	a.	..... is used for binary multiplication? i) Restoring Multiplication ii) Booth's Algorithm iii) Pascal's Rule iv) N.O.T	**(1)**	
	b.	Booth's Algorithm is applied on i) Counter ii) Flip flop iii) Shift register iv) Push down stack	**(1)**	
	c.	IEEE 754 representation for _____. i) Floating Point Number. ii) Integer no. iii) Binary no. iv) Octal no.	**(1)**	
	d.	The addressing mode which makes use of in-direction pointers is _____ i) Indirect addressing mode ii) Index addressing mode iii) Direct addressing mode iv) N.O.T	**(1)**	

2.	**All questions are compulsory.**		(2×2=4)	CO2
	a.	Explain Half Adder with the help logical diagram.	(2)	
	b.	Describe IEEE 754 with any two examples.	(2)	
		SECTION – B		
3.	**Answer any two of the following-**		[2×5=10]	CO2
	a.	What is Adder? Explain the logical diagram & truth table for full adder.	(5)	
	b.	Design the 1 bit ALU with suitable diagram.	(5)	
	c.	Specify significance of array multiplier with suitable example.	(5)	
		SECTION – C		
4	**Answer any one of the following-(Any one can be applicative if applicable)**		[2×6=12]	CO2
	a.	Explain different addressing modes with the help of diagrams.	(6)	
	b.	Explain Fixed and floating-point representations with example.	(6)	
5.	**Answer any one of the following-**			
	a.	Explain the Flow chart & Booth multiplication algorithm with an example.	(6)	
	b.	What is Ripple Carry adder? Also explain the concept of carry look ahead adder.	(6)	