USN :	1	D	S	1		E	C			

Dayananda Sagar College of Engineering

Shavige Malleshwara Hills, Kumaraswamy Layout, Banashankari, Bangalore-560078, Karnataka
Tel : +91 80 26662226 26661104 Extn : 2731 Fax : +90 80 2666 0789
Web - http://www.dayanandasagar.edu Email : hod-ece@dayanandasagar.edu
(An Autonomous Institute Affiliated to VTU, Approved by AICTE & ISO 9001:2008 Certified)
(Accredited by National Assessment & Accreditation Council (NAAC) with 'A' grade)

Department of Electronics & Communication Engg.

Continuous Internal Evaluation – II

Course Name : Computer Organization	Date :	11/11/2020
Course Code : 18EC5DEACO	Day :	Wednesday
Semester : 5 th Semester	Timings :	9:30-11:00AM
Max Marks : 50 M	Duration :	1½ Hrs.

No.		Question Description	Mks	CO & Levels
Q1	(a)	Which representation is most efficient to perform arithmetic operations on the numbers? i) Sign-magnitude ii) 1's complement iii) 2'S complement iv) None of the mentioned	1	
	(b)	If n bit is multiplied with n bit generates i) n/2 bit product ii) n bit product iii) 2n bit product iv) n^2 it product	1	
	(c)	The Booth recorded multiplier for 01110 is i) +1 0 0 -1 0 ii) -1 1 0 +1 0 iii) 0 +1 0 0 -1 iv) None of them	1	
	(d)	Bit pair recording multiplier for -20 (6bits) is i) +1 0 -1 ii) -1 -1 0 iii) -2 0 -1 iv) None	1	
	(e)	$(+1.5)_{10}$ is represented in single precision Floating point number as i) BFC00000 ii) 3FC00000 iii)CF300000 iv)2FC00000	1	
	(f)	Represent the decimal value of 14 in 2's complement (a)0001111(b)1110000 (c)0001110(d)0101110	1	
	(g)	_____ is used to choose between incrementing the PC or performing ALU operations. i) Conditional codes ii) Multiplexer iii) Control unit iv) None of the mentioned	1	
	(h)	If the control signals are generated by combinational logic, then they are generated by a type of _____ controlled unit. i) Micro programmed ii) Software iii) Logic iv) Hardwired	1	
	(i)	The most efficient method followed by computers to multiply two unsigned numbers is _____ (a) Booth algorithm (b) Bit pair recording of multipliers (c) Restoring algorithm (d) Non restoring algorithm	1	
	(j)	When 1101 is used to divide 100010010 the remainder is _____ (a) 101 (b) 11 (c) 0 (d) 1	1	
Q2		Perform signed multiplication of following 2'scomplement numbers using i)Booth's Algorithm ii) bit-pair recoding method. a) A=010111 and B=110110 b) A=110101 and B=011011	10	CO3&L3
Q3		Elaborate the working of single bus organization with neat diagram.	10	C04&L2
Q4	(a)	Perform the multiplication of **9X15**using sequential multiplication with neat diagram. (5 bits)	5	C03&L3
	(b)	Represent the following number in double precision floating point notation. **$(-45.125)_{10}$**	5	C03&L3
		OR		
Q5	(a)	Perform the division of 16/5 using Non-restoration technique with neat diagram.(5 bits)	5	C03&L3
	(b)	Convert the following single precision floating point number into actual decimal number. **(C4900000)**	5	C03&L3
Q6	(a)	List the control sequences required to execute the instruction **ADD R1,(R3)** in single bus organization.	5	C04&L3
	(b)	Describe with neat diagram detailed Hardwired control organization.	5	C04&L3
		OR		
Q7	(a)	Explain with neat diagram the organization of fetching a word from memory.	5	C04&L3
	(b)	Describe floating point division with an example	5	C04&L3