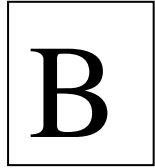**SNS College of Technology, Coimbatore-35.**
(Autonomous)
B.E/B.Tech- Internal Assessment -I
Academic Year 2023-2024(ODD)
Third Semester
Computer Science and Engineering

B

19ITT202 Computer Organization and Architecture
[Common to CSE & IT]

Time: 1.5 Hours   Maximum Marks: 50

Answer All Questions

PART - A (5x 2 = 10 Marks)		**CO**	**Blooms**
1.	List out the components of functional units of Computer.	CO1	Rem
2.	Consider the C← [A] + [B] operation to be performed, write the sequence of instructions to be executed to perform the operation without destroying the former contents of location A and B, with respect to one, two & three address instruction.	CO1	App
3.	Define Bus and label different types of buses used.	CO1	Und
4.	If computer A runs a program in 10 seconds and computer B runs the same program in 15 seconds. How much faster is A than B.	CO1	App
5.	Find 1's and 2's Complement of 1100	CO2	App

PART – B (13+13+14=40 Marks)

6.	(a)	Summarize the functional units of computer by extending the basic operational concepts.	13	CO1	Und
		(or)			
	(b)	Illustrate the execution of straight-line sequencing & branching instruction. Construct & compare the sequence of instruction to be performed for adding n numbers in both sequencing & branching instruction.	13	CO1	App

7. (a) Interpret different addressing modes and experiment all modes by assuming the addition operation of N numbers to be performed and saved in SUM.   13   CO1   App

(or)

(b) Identify the concept of addition and subtraction of signed numbers and examine the usage of each level in a problem.   13   CO2   Ana

8. (a) Registers R1 and R2 of a computer contain the decimal values 1200 and 4600. In each of the following instructions determine the Addressing mode used in the instruction and find the effective address of the memory operand?   14   CO1   App
   a) Load 20(R1),R5
   b) Move #3000,R5
   c) Store R5,30(R1,R2)
   d) Add –(R2),R5
   e) Subtract (R1)+,R5

(or)

(b) Design and inspect the operation of Full Adder by constructing full adder using 2 half adders.   14   CO2   Und

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(Note: Und-Understand   Rem-Remember   Ana-Analyze   App-Apply   Cre- Create)