Reg.No:

|  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

SNS College of Technology, Coimbatore-35.
(Autonomous)
B.E/B.Tech- Internal Assessment -II

Academic Year 2023-2024(ODD)
Third Semester
Computer Science and Engineering

## 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. | How does Computer architecture impact the speed of addition and Multiplication? | CO 2 | Und |
| 2. | Why floating-point number is more difficult to represent and process than integer? | CO 2 | Ana |
| 3. | List the algorithm for non-restoring division | CO 2 | Rem |
| 4. | What are the steps required for a pipelined processor to process the instruction? | CO3 | Rem |
| 5. | How addressing modes affect the instruction pipelining? <br> PART - B (13+13+14=40 Marks) | CO 3 | Und |
| 6. (a) | Examine the two Signed numbers of 23 and -9 by using the 13 Booth's multiplication algorithm | CO 2 | App |
|  | (or) |  |  |
| (b) | Perform Division Restoring Algorithm for the following inputs: <br> Dividend $=11$ <br> Divisor $=3$ | CO 2 | App |
| 7. (a) | Analyze the purpose of the various elements of an 13 instruction with the help of a sample instruction format. | CO3 | Ana |

(b) Write the steps in fetching a word from memory. 13 CO3 Und Differentiate between branch instructions and call subroutine instruction.
8. (a) Formulate binary Multiplication of Positive integer Numbers 14 CO2 App with Register Configuration diagram.

Multiplicand $(\mathrm{M}=13)$ : $1101 \quad$ \&
Multiplier (Q=11) : 1011
(or)
(b) Evaluate the arithmetic statement $\mathrm{X}=(\mathrm{A}+\mathrm{B}) *(\mathrm{C}+\mathrm{D})$ using $\quad 14 \quad \mathrm{CO} 3 \quad \mathrm{App}$ a general register computer with three address, two address and one address instruction format a program to evaluate the expression.

