



VIT

Vellore Institute of Technology

REG.NO.:

NAME OF THE SCHOOL
CONTINUOUS ASSESSMENT TEST - I
WINTER SEMESTER 2024-2025

SLOT: C1 + TC1

Programme Name & Branch : B.Tech Computer Science and Engineering
 Course Code and Course Name : BCSE205L and Computer Architecture and Organization
 Faculty Name(s) : Dr.Ruby D
 Class Number(s) : 1431, 1425, 1476, 1449, 1386, 1427, 1423, 1365, 1393, 1395, 1389,
 1435, 1454, 1441, 1419, 1382, 1417, 1379, 1403, 1421, 1445

Date of Examination : 29/01/2025
 Exam Duration : 90 minutes

Maximum Marks: 50

General instruction(s):

- Answer All Questions
- M - Max mark; CO - Course Outcome; BL - Blooms Taxonomy Level (1 - Remember, 2 - Understand, 3 - Apply, 4 - Analyse, 5 - Evaluate, 6 - Create)
- Course Outcomes (Type the CO statements covered in this question paper. Use the CO number as per the syllabus copy)

CO1 - Differentiate Von Neumann, Harvard, and CISC and RISC architectures. Analyze the performance of machine with different capabilities. Recognize different instruction formats and addressing modes. Validate efficient algorithm for fixed point and floating point arithmetic operations.

Q. No	Question	M	CO	BL
1.	a. Explain the importance of different registers in the IAS computer and illustrate their interconnections with a neat block diagram.	7	CO1	1
	b. Compare CISC and RISC architecture.	3		1
2.	Write an assembly code to execute the following operation and interpret to Von Neumann architecture $Z = ((A+B) + (C-D)) * E$ Note: Program can be stored at memory location 300 onwards and Data variables are available from location address 500 onwards.	10	CO1	1
3.	Calculate 13×-14 using Booth's multiplication algorithm with explanation of the stepwise operation	10	CO1	3
4.	a) Perform non-restoring division with a dividend of 21 and a divisor of 4.	6	CO1	3
	b) Represent 12.25 in Single and Double Precision IEEE -754 standard.	4		
5.	Discuss in detail the classification of instructions based on Operations performed and number of operand references with suitable example.	10	CO1	3
