



VIT[®]

Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

School of Computer Science and Engineering

Winter Semester 2022-2023 Continuous Assessment Test – I

Programme Name & Branch : BCB, BCE, BCI, BCT, BDS, BKT SLOT: B1+TB1

Course Name & code: Computer Architecture and Organization- BCSE205L

Class Number (s): Common to all

Exam Duration: 90 Min.

Maximum Marks: 50

General instruction(s):

Attend all the five questions

Q.No.	Question
1.	a. Give the specifications of IAS machine. (4 Marks) b. Write an Assembly code using IAS instructions for performing the following operations: Z = X / Y Assume that inputs are available in the memory locations 501 and 502. Store the result in memory locations 503 and 504. (6 Marks)
2.	a. Draw the flowchart for the Modified Booth algorithm. (4 Marks) b. Perform multiplication of given two numbers, 15 x -6 using Modified Booth algorithm. Description of each step is expected. (6 Marks)
3.	a. Discuss various representations of fixed point binary numbers with an example. (4 Marks) b. Apply the restoring division algorithm for the given expression. Description of each step is expected. (6 Marks)
4.	a. Discuss about various representations of nonnumeric data. (4 Marks) b. Perform multiplication of the numbers -14 and 5 using Booth multiplication algorithm. Description of each step is expected. (6 Marks)
5.	Differentiate the computer architecture and computer organization and discuss the various functional components of a computer and the interaction between those components. (10 Marks)

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