Roll No: | | | | | | | | | | | |

PRESIDENCY UNIVERSITY

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Bengaluru

Mid Term Examinations - October 2026

Date: 08/10/2026 **Time:** 11:45 AM - 01:15 PM

Course Code: CSE2257 **Course Name:** Computer Organization and Architecture

Semester: Third Semester **Max. Marks:** 50 **Weightage:** 50%

CO - Levels	CO1	CO2
Marks	90	90

PART A: Answer Following Questions. 10 M

Q.N.	Questions	M	CO	BT
1	What is instruction sequencing?	2	CO1	BT2
2	Differentiate between LOAD and STORE Instructions.	2	CO1	BT2
3	What is Effective Address?	2	CO2	BT1
4	Define addressing mode and list its types.	2	CO2	BT1
5	Differentiate between SRAM and DRAM.	2	CO2	BT2

PART B : Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
6	Explain the organization of a computer system using a common bus structure with a neat diagram.	10	CO1	BT2
7	Differentiate between RISC and CISC processors with suitable examples.	10	CO1	BT2

PART C: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
8	Perform the arithmetic operation *+35+-20* using the following 8-bit signed number representations. Show the representation and intermediate steps for each method. (i) Sign-Magnitude (ii) 1's Complement (iii) 2's Complement	10	CO1	BT3
9	Evaluate the expression *C=A-B/A+B* using three-address, two-address, one-address, and zero-address instruction formats.	10	CO1	BT3

PART D: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
10	Explain the different addressing modes used in Instruction Set Architecture (ISA) with suitable examples and discuss their advantages and applications.	10	CO2	BT2
11	Explain the organization and operation of a stack in a computer system. Discuss PUSH and POP operations with suitable examples. Safe PUSH and safe POP routines to be included.	10	CO2	BT2

PART E: Answer Any 1 Following Questions. 10 M

PTO (Please Turn Over)

Q.N.	Questions	M	CO	BT
12	Explain the memory hierarchy with a neat diagram. Discuss the relationship among registers, cache, main memory, and secondary storage in terms of speed, cost, and capacity.	10	CO2	BT2
13	Explain the concept of subroutines and describe the sequence of operations involved in a subroutine call and return. Explain with example code.	10	CO2	BT2