MID TERM EXAMINATIONS- March 2025

Programme	: B.Tech	Semester	: Winter Semester2024-25
Course	: Computer Architecture and Organization	Code	: CSE2003
Date / Session	: 04 March 2025, Session I	Slot	: A14+D11+D12
Time	: 1½ hours	Max. Marks	: 50

Answer all the Questions

Q.No.	Question Description	Marks

1. Discuss the following addressing modes with example:
   - i. Immediate Addressing Mode
   - ii. Direct Memory Addressing Mode
   - iii. Indirect Memory Addressing Mode — 10
   - iv. Direct Register Addressing Mode
   - v. Indirect Register Addressing Mode

2. Illustrate the Von Neumann Machine and Harvard Architecture. Also, differentiate the Von Neumann Machine and Harvard Architecture. — 10

3. Perform the conversions for the following numbers:
   - i. $(56.7)_8 \rightarrow ( )_2$
   - ii. $(EF.45)_{16} \rightarrow ( )_{10}$
   - iii. $(21.58)_{10} \rightarrow ( )_2$ — 10
   - iv. $(11011.1010)_2 \rightarrow ( )_{10}$
   - v. $(CA.3B)_{16} \rightarrow ( )_8$

4. Apply Booth multiplication method to multiple given numbers. Mention the flowchart.
   Multiplicand = (-7)
   Multiplier = (-5) — 10

5. Discuss the memory hierarchy in terms of cost per bit and access time. Compare SRAM and DRAM. — 10

⇔⇔⇔