

MCA I Year I Semester Subject Code: 24MCA1003 Computer Organization

Contact Hour	Unit No.	Topic Name	Teaching Methodology	Remarks
1	1	Functional Unit	Blackboard	
2	1	Basic Operational Concepts	Blackboard	
3	1	Bus Structures	Blackboard	
4	1	System Software	Blackboard	
5	1	Performance	Blackboard	
6	1	History of Computer Development	Blackboard	
7	2	Register Transfer Notation	Blackboard	
8	2	Assembly Language Notation	Blackboard	
9–10	2	Basic Instruction Types	Blackboard	
11	2	Basic I/O Operations	Blackboard	
12	2	Role of Stacks in Programming	Blackboard	
13	2	Role of Queues in Programming	Blackboard	
14	2	Logic Instructions	Blackboard	
15	2	Shift and Rotate Instructions	Blackboard	
16–17	3	Arithmetic Instructions: Inc, Dec, Add, Sub, Mul, Div, Add with Carry, Sub with Borrow	Blackboard	
18	3	Negate (2's complement) Instruction	Blackboard	
19	3	Logic Instructions: AND, OR, XOR	Blackboard	
20–21	3	Branch Instructions	Blackboard	
22–24	3	Addressing Modes: Implied, Immediate, Register, Register Indirect, Auto Increment/Decrement	Blackboard	
25–26	3	Direct, Indirect, Relative, Indexed, Base Register Addressing Modes	Blackboard	
27	4	Accessing I/O Devices	Blackboard	
28	4	Interrupts: Hardware and Concept	Blackboard	
29	4	Enabling and Disabling Interrupts	Blackboard	
30	4	Handling Multiple Devices	Blackboard	
31–32	4	Direct Memory Access (DMA)	Blackboard	
33	4	Synchronous Bus	Blackboard	
34	4	Asynchronous Bus	Blackboard	
35	4	Interface Circuits	Blackboard	
36	4	PCI Bus	Blackboard	
37	4	USB – Universal Serial Bus	Blackboard	
38	5	Memory Hierarchy	Blackboard	
39	5	Semiconductor Memories	Blackboard	
40	5	RAM & ROM	Blackboard	
41	5	Types of ROM	Blackboard	
42–43	5	Cache Memory & Performance Considerations	Blackboard	
44–45	5	Virtual Memory & Paging	Blackboard	

46	5	I/O Interface	Blackboard	
47	5	Programmed I/O, Memory-Mapped I/O	Blackboard	
48	5	Interrupt Driven I/O and DMA – Comparison	Blackboard	