

**BONAM VENKATA CHALAMAYYA INSTITUTE OF TECHNOLOGY & SCIENCE
(AUTONOMOUS)**

I – MCA I - Semester Regular Examinations (BR25), Feb - 2026

COMPUTER ORGANIZATION (MCA)

Time: 3 hours

Max. Marks: 60

*Answer any Five Questions One Question from One UNIT
ALL the Questions Carry Equal Marks*

UNIT-I		Marks	CO	BL
1.a)	Explain the bus structure of a computer system	6M	CO1	BL2
b)	Explain processor clock and clock rate	6M	CO1	BL2
OR				
2.a)	Explain basic functional unit with block diagram.	6M	CO1	BL2
b)	Explain the evaluation of computer systems	6M	CO1	BL2
UNIT-II		Marks	CO	BL
3.a)	Explain different addressing modes with suitable examples	6M	CO2	BL2
b)	Explain overflow in integer arithmetic with suitable examples	6M	CO2	BL2
OR				
4.a)	Explain instruction execution and straight-line sequencing	6M	CO2	BL2
b)	Explain assembly language and its advantages over machine language	6M	CO2	BL2
UNIT-III		Marks	CO	BL
5.a)	Explain different methods of accessing I/O devices with suitable examples	6M	CO3	BL2
b)	What is Direct Memory Access (DMA) and explain its operation.	6M	CO3	BL3
OR				
6.a)	Explain Interrupt Service Routine (ISR) with suitable examples	6M	CO3	BL3
b)	Explain vectored and non-vectored interrupts with examples.	6M	CO3	BL2
UNIT-IV		Marks	CO	BL
7.a)	Explain cache mapping techniques with examples	6M	CO4	BL2
b)	Differentiate between RAM and ROM.	6M	CO4	BL4

OR

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|------|---|----|-----|-----|
| 8.a) | Explain paging technique used in virtual memory. | 6M | CO4 | BL2 |
| b) | Explain secondary storage devices used in computer systems. | 6M | CO4 | BL2 |

UNIT-V

Marks CO BL

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|------|---|----|-----|-----|
| 9.a) | Explain the basic concepts of parallel processing. | 6M | CO5 | BL2 |
| b) | Differentiate between uniprocessor and multiprocessor systems | 6M | CO5 | BL4 |

OR

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|-------|---|----|-----|-----|
| 10.a) | Explain the performance improvement achieved using pipelining | 6M | CO5 | BL2 |
| b) | Explain cache coherence problem in multiprocessor systems | 6M | CO5 | BL2 |
