BACHELOR OF TECHNOLOGY (CBCS - 2023)
B. Tech. Sem-III Computer Science & Business Systems : SUMMER : 2025
SUBJECT: COMPUTER ORGANIZATION & ARCHITECTURE

Day : Wednesday
Date : 14/05/2025

S-29214-2025

Time : 02:30 PM-05:30 PM
Max. Marks : 60

N.B.

1) All questions are **COMPULSORY.**
2) Figures to the right indicate **FULL** marks.
3) Use of non-programmable calculator is allowed.
4) Assume suitable data if necessary.

Q.1	Define an addressing mode. Explain various addressing modes with suitable examples.	**(10)**
	OR	
Q.1	Draw and explain functional blocks of computer.	**(10)**
Q.2	Using flowchart discuss the hardware algorithm for addition and subtraction.	**(10)**
	OR	
Q.2	Apply Booth's algorithm to multiply (23)*(19) by showing every step clearly.	**(10)**
Q.3	Compare micro-programmed control with hard wired control.	**(10)**
	OR	
Q.3	Explain horizontal and vertical microinstruction format.	**(10)**
Q.4	Draw and explain memory hierarchy.	**(10)**
	OR	
Q.4	Categorize the different types of memory interleaving techniques used in computer systems.	**(10)**
Q.5	Explain Direct Memory Access in detail.	**(10)**
	OR	
Q.5	Discuss briefly about universal serial bus (USB).	**(10)**
Q.6	List and explain different data hazards in instruction pipeline.	**(10)**
	OR	
Q.6	What is cache coherency? Explain MESI protocol.	**(10)**

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