GUJARAT TECHNOLOGICAL UNIVERSITY
BCA/ MCA INTEGRATED – SEMESTER I- EXAMINATION –SUMMER-2025

Subject Code: BC01001011   **Date: 31/05/2025**
Subject Name: Fundamental of Computer Organization
Time:02:30 PM TO 05:00 PM   **Total Marks: 70**
Instructions:

    1. Attempt all questions.
    2. Make Suitable assumptions wherever necessary.
    3. Figures to the right indicate full marks.
    4. Use of simple calculators and non-programmable scientific calculators are permitted.

                                                     Marks

Q.1	**(a)**	Explain all Logic Gates.	**07**
	(b)	Convert following decimal value to binary, octal and hexadecimal: (i) $(960)_{10}$ (ii) $(1228)_{10}$	**07**
Q.2	**(a)**	Explain Functional Units of Computer.	**07**
	(b)	Write a short note on Pipeline.	**07**
		OR	
	(b)	What is bus? Explain Bus structure.	**07**
Q.3	**(a)**	Explain Arithmetic Micro Operation and Logic Micro Operation.	**07**
	(b)	Explain Instruction Cycle and Addressing Modes.	**07**
		OR	
Q.3	**(a)**	Explain Shift Micro Operation.	**07**
	(b)	Explain Memory - Reference Instruction and Input - Output Instruction.	**07**
Q.4	**(a)**	Explain Half Adder and Full Adder.	**07**
	(b)	Draw flowchart of multiplication algorithm and explain it.	**07**
		OR	
Q.4	**(a)**	Compare RISC & CISC processor	**07**
	(b)	Explain Half Subtractor and Full Subtractor.	**07**
Q.5	**(a)**	Write a short note on RAID.	**07**
	(b)	Write a short note on semiconductor RAM memories.	**07**
		OR	
Q.5	**(a)**	Define ROM. Explain various types of ROMs.	**07**
	(b)	Write a short note on Virtual Memory	**07**

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