GUJARAT TECHNOLOGICAL UNIVERSITY
MCA INTEGRATED - SEMESTER– I • EXAMINATION – WINTER 2019

Subject Code: 2618601   **Date: 17/12/2019**
Subject Name: Fundamental of Computer Organization
Time:10:30 AM TO 01:00 PM   **Total Marks: 70**
Instructions:
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	**Abbreviation the following:**	**07**
		1. BIOS	
		2. RAM	
		3. BCD	
		4. ALU	
		5. USB	
		6. POST	
		7. UPS	
	(b)	What are output devices? Explain any five in detail.	**07**
Q.2	**(a)**	**Explain working of:**	**07**
		1. MOV	
		2. MUL	
		3. DEC	
		4. CMP	
		5. NEG	
		6. XOR	
		7. INC	
	(b)	Explain De Morgan's Theorems with basic laws of Boolean algebra.	**07**
		OR	
	(b)	Explain different Peripheral devices of computer in detail.	**07**
Q.3	**(a)**	What are different types of number systems used to represent numeric data?	**07**
	(b)	1. Explain sum of product and product of sum with example	**05**
		2. Convert $(A37E)_{16}$ into $(?)_{10}$	**02**
		OR	
Q.3	**(a)**	Draw logical gate circuit and truth table for: $F=(A+B+C)*(A'+B'+C')*(A+B'+C)$	**07**
	(b)	Explain 1-bit binary half adder and full adder in detail (with example)	**07**
Q.4	**(a)**	Explain the use of Complements to represent negative numbers in binary and other number systems.	**07**
	(b)	Explain different types of logical gates available.	**07**
		OR	
Q.4	**(a)**	Explain RAM and ROM. What are the key difference between RAM and ROM.	**07**
	(b)	What are different types of addressing techniques available to store the data.	**07**
Q.5	**(a)**	What is basic working and application of multiplexer.	**07**
	(b)	Explain instruction Cycle and Execution Cycle organization of Control Registers.	**07**
		OR	
Q.5	**(a)**	What is cache memory? Explain work of it	**07**
	(b)	Define bus. Explain different types of buses are available in system	**07**

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