GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–VI EXAMINATION – SUMMER 2025

Subject Code: 3160712   **Date: 22-05-2025**
Subject Name: Microprocessor and Interfacing
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.**
4. **Simple and non-programmable scientific calculators are allowed.**

			Marks
Q.1	**(a)**	Explain bus organization in 8085 Microprocessor	**03**
	(b)	Explain general purpose registers in 8085 Microprocessor	**04**
	(c)	Explain de-multiplexing of $AD_0 - AD_7$ in 8085 microprocessor with suitable diagram	**07**
Q.2	**(a)**	Explain function of following 8085 pins (1) READY (2) HLDA (3) X1 & X2	**03**
	(b)	Draw timing diagram of instruction MOV A , B	**04**
	(c)	Explain flag register of 8085 Microprocessor with diagram	**07**
		OR	
	(c)	Draw and explain architecture of 8085 Microprocessor	**07**
Q.3	**(a)**	Explain function of given instructions : (1) DAD (2) LHLD (3) XCHG	**03**
	(b)	Explain indirect addressing mode in 8085 with examples	**04**
	(c)	Write an assembly language program to find smallest number from numbers stored at memory location 1000H and 1001H. Store result on memory location 2000H	**07**
		OR	
Q.3	**(a)**	Explain function of given instructions : (1) ANI (2) RLC (3) SIM	**03**
	(b)	Explain registor addressing mode in 8085 with examples	**04**
	(c)	Write a set of 8085 assembly language instructions to generate a 1 second delay, if the crystal frequency is 1 MHz.	**07**
Q.4	**(a)**	Define (1) Stack (2) Counter (3) Time Delay	**03**
	(b)	Explain subroutine in 8085 Microprocessor with example	**04**
	(c)	Draw and explain input and output handshake mode of 8255A	**07**
		OR	
Q.4	**(a)**	Differentiate maskable and non-maskable interrupts in 8085 Microprocessor	**03**
	(b)	Explain control registor in 8255A with diagram	**04**
	(c)	Explain Programmable Interrupt Controller 8259A	**07**
Q.5	**(a)**	Describe operating modes in 8086 Microprocessor	**03**
	(b)	Explain segment registers in 8086 Microprocessor	**04**
	(c)	Draw and explain architecture of 80286 Microprocessor	**07**
		OR	
Q.5	**(a)**	Differentiate GDT and LDT in 80286 Microprocessor	**03**
	(b)	Explain registor organization in 80386 Microprocessor	**04**
	(c)	Draw and explain pin diagram of 8086 Microprocessor	**07**

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