Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–IV (OLD) - EXAMINATION – SUMMER 2017

Subject Code: 140701   **Date: 01/06/2017**

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.**

Q.1	**(a)**	Draw and Explain Internal Architecture of 8085 Microprocessor.	**07**
	(b)	Draw and Explain De-multiplexing of Multiplexed Address/Data bus and control signal generation in 8085 Microprocessor.	**07**
Q.2	**(a)**	Explain the interrupt types and priorities in 8085 with necessary diagram.	**07**
	(b)	Define Addressing Mode. Explain various addressing modes supported by 8085 with suitable example.	**07**

OR

	(b)	What is stack and stack pointer? Explain working of PUSH and POP instruction with suitable example.	**07**
Q.3	**(a)**	Briefly explain different parameters used for ADC. Explain interfacing scheme for 8-bit ADC with 8085 Microprocessor	**07**
	(b)	Design an Interfacing circuit to connect 4k×8 EPROM with starting address from 0000H and 2k×8 RAM starting address 2000H onwards.	**07**

OR

Q.3	**(a)**	Compare (a). Memory mapped I/O with I/O mapped I/O (b). Absolute Decoding with Partial Decoding.	**07**
	(b)	Write short note on Memory Classification.	**07**
Q.4	**(a)**	Explain 8255 Programmable Peripheral Interface Chip with Block Diagram.	**07**
	(b)	Explain 8254 Programmable Interval Timer Chip with Block Diagram.	**07**

OR

Q.4	**(a)**	Explain 8279 Keyboard and Display Interface Chip with Block Diagram	**07**
	(b)	Explain 8237 DMA Controller with Block Diagram.	**07**
Q.5	**(a)**	Write a program to add any ten byte type hexadecimal numbers. Store the results LSB (Sum) at 4000H and MSB (Carries) at 4001H.	**07**
	(b)	Write an 8085 program to count the number of odd numbers in a block of ten numbers. Number is odd, if it's LSB = 1. Store your answer in ACC.	**07**

OR

Q.5	**(a)**	Write a program for 8085 to generate a square wave with period of 400μs. Use bit D0 to output the square wave. The system clock period is 325ns	**07**
	(b)	Write a program to sort set of marks scored by ten students in a database course in descending order. (assume data stored at memory location 2050h)	**07**

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