Seat No.: _____ Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–IV (OLD) EXAMINATION – WINTER 2018

Subject Code:140701 **Date: 28/11/2018**

Subject Name: Microprocessor And Interfacing

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.**

Q.1	**(a)**	i. Distinguish between assembly language and high level languages.	**04**
		ii. Explain flag register in 8085.	**03**
	(b)	i. Explain functioning of following pins of 8085. (i) ALE (ii) READY (iii) INTR (iv) HOLD.	**04**
		ii. The memory map of 8K byte memory chip begins at the location 8000 H. Specify the address of the last location on the chip.	**03**
Q.2	**(a)**	Compare memory mapped I/O with I/O mapped I/O.	**07**
	(b)	Explain execution of instruction LDA 3000H with timing diagram.	**07**
		OR	
	(b)	Explain execution of instruction OUT F0H with timing diagram.	**07**
Q.3	**(a)**	What is stack and stack pointer? Explain working of PUSH and POP instructions with suitable example.	**07**
	(b)	What do we mean by Addressing Modes? Explain, giving suitable example, all the addressing modes supported by 8085.	**07**
		OR	
Q.3	**(a)**	Write a program to generate delay of 50 msec. Make necessary assumptions and mention it clearly.	**07**
	(b)	Explain following instructions of 8085. (i) LDA and LDAX (ii) RAL and RLC (iii) DAA	**07**
Q.4	**(a)**	Data block of ten data bytes is stored in memory starting from locations 2000H. Write a program to count even numbers in this data block. Store the result in memory location 3000H.	**07**
	(b)	List various vectored interrupts in 8085. Give their vectored locations, triggering methods and priority.	**07**
		OR	
Q.4	**(a)**	A binary number is stored in memory location 2000H. Write a program to convert it into equivalent unpacked BCD representation. Store result in consecutive memory locations starting from 3000H with most significant digit stored first.	**07**
	(b)	Explain the function of RIM and SIM instructions in 8085.	**07**
Q.5	**(a)**	Draw and explain block diagram of 8255.	**07**
	(b)	With neat diagram discuss working of IC 8259A -Programmable interrupt controller.	**07**
		OR	
Q.5	**(a)**	Explain with block diagram function of 8254 programmable interval timer.	**07**
	(b)	What is direct memory transfer? Explain 8257 DMA controller with block diagram.	**07**

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