Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY
PDDC SEM-IV Examination-Nov-2011

Subject code: X40901 **Date: 21/11/2011**
Subject Name: Microprocessor & Interfacing
Time: 2.30 pm -5.00 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)**	State the functions of following pins of 8085 microprocessor 1. INTR 2. SID 3. HOLD & HLDA 4. IO/M, 5. SO&SI, 6. ALE and 7.READY	**07**
	(b)	State and explain (for 8085 microprocessor), various Microprocessor initiated operations with clearly mentioning the buses involved in it.	**07**
Q.2	**(a)**	Give instruction classification of 8085 with suitable example. Explain various arithmetic instructions in detail.	**07**
	(b)	Describe various Addressing modes of 8085 microprocessor.	**07**
		OR	
	(b)	Make control word , when the ports of Intel 8255 are defined as follows: 1. Port A as an input port. 2. Mode of Port A-mode 0 3. Port B as an Output port 4. Mode of Port B-mode 0	**07**
Q.3	**(a)**	Explain the execution of PUSH and POP instructions with necessary flow diagram. .	**07**
	(b)	Describe various Flags in 8085 Micro processor and state when they are set and reset	**07**
		OR	
Q.3	**(a)**	Describe Memory organization of 8085 Microprocessor with classification of memory.	**07**
	(b)	Draw the functional block diagram of 8253 programmable interrupt timer and explain each block in Detail.	**07**
Q.4	**(a)**	Draw architecture of 8085 microprocessor and explain ALU.	**07**
	(b)	Sketch the block diagram of 8255 and explain the function of each block	**07**
		OR	
Q.4	**(a)**	Sketch the block diagram of successive approximation type A to D converter and explain the Conversion process of 4 bit converter.	**07**
	(b)	Explain RIM and SIM in detail.	**07**

Q.5	**(a)**	Explain different ROTATE instructions giving illustrations in each case.	**07**
	(b)	Describe the process of Digital to Analog conversion by Binary Weighted resister method.	**07**

OR

Q.5	**(a)1.**	Write an assembly language program to mask the lower nibble of an 8 bit number. Assume the 8 bit no in register A. Store the result in register B.	**04**
	2.	Find the 2's complement of the number stored at memory location C200H and store the complemented number at memory location C300H	**04**
	(b)	Write a program to add the content of memory locations D000H and D001H.Store the result in memory location D002H.	**06**

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