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

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V (NEW) - EXAMINATION – SUMMER 2016

Subject Code:2150707 **Date:09/05/2016**

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)**	Draw the functional block diagram of internal architecture of IC 8085 and Explain its working.	**07**
	b)	Write an 8085 program to copy block of five numbers starting from location 2001h to locations starting from 3001h.	**07**
Q.2	**a)**	Explain the Architecture of Pentium Processor.	**07**
	b)	List and Explain categories of 8085 instructions that deal with data transfer.	**07**
		OR	
	b)	Explain the working of rotate instructions of 8085 with proper example in each case.	**07**
Q.3	**a)**	Draw and explain block diagram of 8255A programmable peripheral interface device. What do you mean by BSR mode?	**07**
	b)	How many machine cycles are required to execute MVI A,32H instruction? Draw compete timing diagram with each machine cycle and find execution time for instruction with assume clock frequency f=2 MHz	**07**
		OR	
Q.3	**a)**	Draw and explain programmable interrupt controller 8259A.	**07**
	b)	How many machine cycles are required to execute MOV r,M instruction? Draw compete timing diagram with each machine cycle and briefly explain it.	**07**
Q.4	**a)**	Write ALP to calculate the factorial of a number between 0 to 8.	**07**
	b)	Explain RIM and SIM instructions with pseudo code example.	**07**
		OR	
Q.4	**a)**	Write ALP for displaying binary up counter. Counter should count numbers from 00H to FFH and it should increment after every 0.5 sec. (use 8085 operating frequency =2MHz)	**07**
	b)	Explain subroutine with proper example.	**07**
Q.5	**a)**	Explain the architecture of the 80386 with a neat block diagram.	**07**
	b)	Discuss the features of ARM Processor.	**07**
		OR	
Q.5	**a)**	Describe the architecture of the 80286 with a neat block diagram.	**07**
	b)	Draw and explain architecture of SUN SPARC.	**07**

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