Seat No.:	Enrolment No.

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

BE - SEMESTER-IV (OLD) - EXAMINATION - SUMMER 2017
Subject Code: 140701
Date: 01/06/2017

	U	Coue: 140/01 Date: 01/00/20	11/
Ti	•	Name: Microprocessor And Interfacing 0:30 AM to 01:00 PM Total Marks:	70
1115	1. 2. 3.	Attempt all questions.  Make suitable assumptions wherever necessary.	
Q.1	(a) (b)	Draw and Explain Internal Architecture of 8085 Microprocessor.  Draw and Explain De-multiplexing of Multiplexed Address/Data bus and control signal generation in 8085 Microprocessor.	07 07
Q.2	(a) (b)	Explain the interrupt types and priorities in 8085 with necessary diagram.  Define Addressing Mode. Explain various addressing modes supported by 8085 with suitable example.	07 07
	<b>(b)</b>	OR 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>(b)</b>	Design an Interfacing circuit to connect 4k×8 EPROM with starting address from 0000H and 2k×8 RAM starting address 2000H onwards.  OR	07
Q.3	(a)	Compare (a). Memory mapped I/O with I/O mapped I/O (b). Absolute Decoding with Partial Decoding.	07
	<b>(b)</b>	Write short note on Memory Classification.	<b>07</b>
Q.4	(a) (b)	Explain 8255 Programmable Peripheral Interface Chip with Block Diagram.  Explain 8254 Programmable Interval Timer Chip with Block Diagram.  OR	07 07
Q.4	(a) (b)	Explain 8279 Keyboard and Display Interface Chip with Block Diagram Explain 8237 DMA Controller with Block Diagram.	07 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>(b)</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
Q.5	(a)	<b>OR</b> 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>(b)</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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