Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER– IV(NEW) – EXAMINATION – SUMMER 2019

Subject Code: 2140304   **Date: 13/05/2019**

Subject Name: Microprocessor & its 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.

			MARKS
Q.1	(a)	Explain 8085 Assembly language and Machine Language.	03
	(b)	Draw Pin Diagram of 8085 Microprocessor.	04
	(c)	Draw and explain architecture of 8085 Microprocessor.	07
Q.2	(a)	Explain the signals HOLD, READY and ALE.	03
	(b)	Give difference between Memory mapped I/O and Peripheral mapped I/O.	04
	(c)	Write a short note on Memory classification in 8085.	07

OR

	(c)	Explain the timing Diagram for the Instruction MVI A,65H.where the machine codes are stored at 2002H &2003H location.	07
Q.3	(a)	Explain the following instructions of microprocessor 8085 (i) LHLD (ii) DAD (iii) DAA	03
	(b)	Explain Demultiplexing of Address Bus using ALE.	04
	(c)	Interface 16K of ROM with starting address 0000h and Interface 8K RAM with starting address 4000h with 8085.	07

OR

Q.3	(a)	Explain Instruction format of 8085.	03
	(b)	Explain following Instructions (i) LDAX (ii) XCHG (iii) PUSH (iv) STA	04
	(c)	Interface an 8-bit D/A converter with 8085. Write a program to generate a continuous ramp waveform.	07
Q.4	(a)	An 8-bit binary number is stored in memory location 2000H. Write a program to convert the number into ASCII code.	03
	(b)	Compare (i) Jump and Call instruction (ii) Serial & Parallel Transfer.	04
	(c)	What is an addressing mode? With suitable example, explain any 4 addressing modes in 8085	07

OR

Q.4	(a)	What is stack & Stack Pointer Register?	03
	(b)	Explain Interrupts of 8085.	04
	(c)	Write a program to generate a continuous square wave with the period of 1msec. Assume clock frequency 12MHz & use bit D0 to output square wave.	07
Q.5	(a)	Compare CALL & RET instruction.	03
	(b)	Explain the working of 8255 in various modes.	04
	(c)	Explain Control Word format and different modes of 8254.	07

OR

Q.5	(a)	Draw interfacing diagram of 8155.	**03**
	(b)	10 Student's exam marks are stored in memory location starting at 2010h. Write an ALP to find the lowest marks & store it at location 2050h.	**04**
	(c)	Explain brief about the internal hardware architecture of 8086 microprocessor with a neat diagram.	**07**

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