## GUIARAT TECHNOLOGICAL UNIVERSITY

Sub	iect (	BE - SEMESTER-V (NEW) EXAMINATION – SUMMER 2019 Code: 2150907  Date: 31/0	5/2019
Sub Tim	ject l	Name: Microprocessor and Microcontroller Architecture & Interface: 30 PM TO 05:00 PM Total Mar	cing
Ilisti	1. 2.	Attempt all questions.  Make suitable assumptions wherever necessary.  Figures to the right indicate full marks.	
	٠.	1 igures to the right mureure run murasi	MARKS
Q.1	(a) (b)	-	03 04
	(c)	Draw & explain the timing diagram of MVI A, 32H instruction for 8085.	07
Q.2	(a)		03
	<b>(b)</b>	-	04
	(c)	How demultiplexing of address/data lines $(AD0 - AD7)$ can be achieved? Also explain the generation of all the control signals.	07
		OR	. –
	(c)	Write a short note on interrupts available in 8051.	07
Q.3	(a)	Explain assembly directives.	03
	<b>(b)</b>	Explain the instruction DJNZ & JBC in 8051	04
	(c)	Write an assembly program to find 0's & 1's from a given number.	07
		OR	
Q.3	(a)	List all the data types available in C.	03
	(b)	Explain the programming model of 8085.  Write an assembly program to add two 16 bit numbers.	04 07
	(c)	write an assembly program to add two 10 bit numbers.	07
Q.4	(a)	What is the function of temporary registers W & Z in 8085.	03
	<b>(b)</b>	Compare Von Neumann & Harvard architecture.	04
	(c)	Write a C program to toggle all the bits of port 1 at a time delay of 50	07
		ms.	
Q.4	(a)	Why C programming is preferred over assembly programming?	03
	<b>(b)</b>	<del>_</del>	04
	(c)	generate time delay of 25 ms. Assume clock frequency as 11.0592MHz Write a C program to continuously transfer the message "YES" serially at 9600 baud, 8 bit data, and 1 stop bit.	07
Q.5	(a)	What is RETI instruction? How it is different from RET instruction?	03
	<b>(b)</b>	List the alternate functions of all the pins of port 3.	04
	(c)	Draw & explain the interfacing of matrix keyboard with 8051.	07
	_	OR	
Q.5	(a)	Explain the advantage of IDE in program development.	03
	(b) (c)	Write a short note on types of memory.  Explain the role of SBUF & SCON registers in serial transfer in8051.	04 07
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