1T01874 - S.E.(Computer Science & Engineering (Artificial Intelligence and Machine Learning) (R-2019-20)('C' Scheme) Semester - IV / 38975 - Microprocessor

QP CODE: 10038704   DATE: 19/12/2023

Duration: 3hrs   **[Max Marks: 80]**

N. B : (1) Question No 1 is Compulsory.
(2) Attempt any three questions out of the remaining five.
(3) All questions carry equal marks.
(4) Assume suitable data, if required and state it clearly.

1		Attempt any FOUR	[20]
	a	Explain the Floating point Pipeline of Pentium Processor.	
	b	What is the advantage of Memory Banking in 8086 Processor? Justify with example.	
	c	Write an assembly language program for searching a Character in a Given String.(Consider your own String)	
	d	Explain the following instructions: XLAT, DAA, LAHF, AAA related to 8086.	
	e	Differentiate between real Mode, Virtual Mode and Protected Mode of 80386 Processor.	
2	a	Draw and explain write operation Timing diagram of 8086 Processor in Maximum mode.	[10]
	b	Draw and Explain the Master Slave Mode of 8259 Processor with Suitable example. Consider Slave 8259 connected to IR0 and IR4 of master.	[10]

3	a	Design 8086 microprocessor-based on following Specifications:
		   1. MP 8086 working at 10MHz minimum mode.
		   2. 64 KB ROM using 16KB Devices
		   3. 32KB RAM using 16KB chips
			[10]

	b	Explain Mode 2 of 8255 with a neat block diagram. Show the CWR initialization.	[10]
4	a	Explain the 8257 DMA controller with the help of neat diagram and explain its Control Register Format.	[10]
	b	Write an ALP for 8086 to arrange 10 numbers in ascending order.	[10]
5	a	Explain the segment descriptor of 80386 processor.	[10]
	b	Explain the EFLAG REGISTER of 80386 Processor.	[10]
6	a	Explain the interrupt structure of 8086 processor.	[10]
	b	Explain the Branch Prediction Mechanism of Pentium Processor.	[10]

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