Roll Number:_____

Thapar Institute of Engineering & Technology, Patiala

Department of Computer Science &Engineering

Auxiliary exam (August 2022)

B. E.(COE/CSE) : AUX	Course Code: UCS617
	Course Name: Microprocessor Based System Design
August, 2022	5:30 PM - 7:30 PM
Time: 2 Hours, M. Marks: 35	Faculty: SHI

Note: All questions carry equal marks. Attempt all questions.

Q.1	a. What are various interrupts in 8085 Microprocessor explain briefly b. Explain different addressing modes of 8086 which are not in 8085. Explain each with an example	**(5+5)**
Q.2	Show the sequence of operations of Programmable Interrupt Controller with 8086 microprocessor	**(10)**

Q.3	Differentiate between the following:
	A. 80386, 80486 and Pentium Processor in terms of address , data bus, speed.
	B. For the following program:
	MOV AL, '9'
	ADD AL, '5'
	AAA
	What are the contents after each step execution?
		(5+5)

Q.4	3000 : MVI D, 30H 3002 : MVI E, 01H 3004 : LDAX D 3005 : CPI 40H 3007 : HLT When above instructions (program) is executed what will be content of A and status of flag CY and Z.	**(10)**
Q.5	The four segment registers contain the upper 16 bits of the starting addresses of the four memory segments of 64 KB each. Let the starting address of each segment in registers DS= 2000, CS=3000, SS=5000 and ES=7000. Find the values of each segment registers. Further each associated offset registers is BX = 1000H, SI = 2000H, DI = 3000H, and BP = 4000H. Find the Physical address/addresses from where the 8086 accesses the data while executing the following instructions. i. MOV AX, [BX] ii. MOV CX, [BP] iii. MOV BX, [BP + DI + 34] iv. MOV AH, [BX + 13H] v. MOV CX, DS: [BP + 7] vi. MOV BX, [SI - 5] vii. LEA CX, [BP+SI]	**(10)**