Code No: 5D408   **Date: 22-August-2024 (FN)**

B.Tech II-Year II- Semester External Examination, August - 2024 (Supplementary)
COMPUTER ORGANIZATION AND MICROPROCESSOR & INTERFACING (CSE)

Time: 3 Hours   **Max.Marks:75**

> **Note:**   a) No additional answer sheets will be provided.
> b) All sub-parts of a question must be answered at one place only, otherwise it will not be valued.
> c) Missing data can be assumed suitably.

Bloom's Cognitive Levels of Learning (BCLL)

Remember	L1	Apply	L3	Evaluate	L5
Understand	L2	Analyze	L4	Create	L6

Part - A   **Max.Marks:25**
ANSWER ALL QUESTIONS

		BCLL	CO(s)	Marks
1	Explain about Floating Point representation.	L2	CO1	[2M]
2	Explain about logic micro-operations.	L2	CO2	[2M]
3	Define micro program.	L1	CO3	[2M]
4	Discuss about Special function Registers in 8086.	L2	CO4	[2M]
5	Explain TEST and READY Signals in 8086.	L2	CO5	[2M]
6	Explain the function of Interrupt vector table.	L2	CO6	[3M]
7	Explain about Arithmetic logic shift unit.	L2	CO1	[3M]
8	Discuss any two assembler directives of 8086.	L2	CO4	[3M]
9	Write an 8086 program for adding two numbers.	L1	CO5	[3M]
10	Explain the interrupt structure of 8086.	L2	CO6	[3M]

Part – B   **Max.Marks:50**
ANSWER ANY FIVE QUESTIONS. EACH QUESTION CARRIES 10 MARKS.

			BCLL	CO(s)	Marks
11.	a)	Apply 2's complement to perform the arithmetic operation (+35) – (- 15)	L3	CO1	[5M]
	b)	Analyze the binary word 10110 into 9 bits with odd parity hamming code.	L4	CO1	[5M]
12.	a)	Define Instruction Cycle. Draw the flowchart of instruction cycle.	L2	CO2	[5M]
	b)	List any two similarities and differences among memory reference and register reference instructions.	L2	CO2	[5M]
13.	a)	Explain about Micro programmed Control unit design.	L2	CO3	[5M]
	b)	Draw and explain the flow chart for any two logical operations.	L2	CO3	[5M]
14.	a)	Draw the architecture of 8086 microprocessor and mention its salient features.	L2	CO4	[5M]
	b)	Mention the different memory segments of 8086 and list its importance.	L2	CO4	[5M]
15.	a)	Discuss in detail about the maximum mode signals of 8086 microprocessor.	L2	CO5	[5M]
	b)	Write an 8086 program for sorting numbers in descending order.	L1	CO5	[5M]
16.	a)	What are the different sources of 8086 interrupts? Briefly explain the steps taken by the processor to execute an interrupt.	L2	CO6	[5M]
	b)	Draw the circuit diagram of interfacing 8086 CPU to DAC0808 using 8255 PPI.	L2	CO6	[5M]

17. a) Apply 2's Complement to perform the arithmetic operation (+33) + (-25) L3 CO1 [4M]
    b) Write a short note on Shift micro-operations. L1 CO2 [3M]
    c) Draw and explain the flow chart for Division operation. L1 CO3 [3M]

18. a) Write the 8086 assembly language program to check whether the number is Palindrome or not. If it is palindrome, set the carry otherwise clear the carry. L2 CO4 [5M]
    b) Discuss the interface of 8086 with keypad and Display device with a suitable diagram. L1 CO5 [5M]

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