Roll No: | | | | | | | | | | | | |

BTECH
(SEM VI) THEORY EXAMINATION 2024-25
MICROPROCESSOR

TIME: 3 HRS   **M.MARKS: 70**

Note: Attempt all Sections. In case of any missing data; choose suitably.

SECTION A

1.   **Attempt *all* questions in brief.**   **02 x 7 = 14**

Q no.	Question	CO	Level
a.	Which interrupts has highest Priority (i) INTR (ii) TRAP (iii) RST 6.5 (iv) RST 7.5	1	K2
b.	In 8085 name the 16 bit register. (i) Stack Pointer (ii) Program Counter (iii) IR (iv) i and ii both	1	K2
c.	3. Access time is faster for (i) ROM (ii) SRAM (iii) DRAM (iv) EPROM	1	K2
d.	What do you understand by Min/Max mode of 8086 microprocessor?	3	K2
e.	How large is the instruction queue of the 8086?	3	K2
f.	Write down the basic differences between 8085 and 8086 microprocessor	2	K2
g.	Define the LDA instruction of 8085	1	K2

SECTION B

2.   **Attempt any *three* of the following:**   **07 x 3 = 21**

Q no.	Question	CO	Level
a.	Define T-state and in which T-cycle the ALE signal is activated?	1	K2
b.	Explain the Block diagram of 8085.	1	K2
c.	Explain the seven segment display with suitable diagram.	5	K2
d.	Define branching operation of 8085 with an example.	1	K2
e.	Explain RS 232C Pin diagram and functioning.	5	K2

	Explain how many times the following loop will be executed in 8085microprocessor:
	
	    LXI B, 0007H
	    LOOP: DCX B
	    JNZ LOOP.
		1	K2

SECTION C

3.   **Attempt any *one* part of the following:**   **07 x 1 = 07**

Q no.	Question	CO	Level
a.	What are the various registers in 8085 also write down the size of the registers?	3	K2
b.	Explain the Pin diagram of 8086 microprocessor.	4	K2

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4.   **Attempt any *one* part of the following:**   **07 x 1 = 07**

Q no.	Question	CO	Level
a.	Write the instruction to load the number 2050H in the register pair BC in 8085. Increment the number using the instruction INX B and Illustrate whether the INX B instruction is equivalent to the instructions INR B and INR C.	1	K2

b.	Write instruction to:
	    (i) Load 08H in the accumulator.
	    (ii) Increment the accumulator.
	    (iii) Display the answer.
		2	K2

5.   **Attempt any *one* part of the following:**   **07 x 1 = 07**

Q no.	Question	CO	Level
a.	If the 8085 microprocessor adds 89H and 79H specify the contents of accumulator and status of S, Z and CY flags.	2	K2

b.	Find out time delay of the following loop if the processor frequency is 2 MHz.
	    MVI C,FF 7T
	    DCR C Loop 4T
	    JNZ Loop 10/7T
		2	K2

6.   **Attempt any *one* part of the following:**   **07 x 1 = 07**

Q no.	Question	CO	Level
a.	What are the different addressing modes of 8085?	1	K2
b.	Explain the Pin diagram of 8086 microprocessor.	3	K2

7.   **Attempt any *one* part of the following:**   **07 x 1 = 07**

Q no.	Question	CO	Level
a.	Draw and explain the 8257 DMA controller.	5	K2
b.	Write an assembly language program for 8085 to add two 16-bit numbers.	1	K2