1128

B. E. (Computer Science and Engineering)
Third Semester
CS-304: Microprocessors

Time allowed: 3 Hours   Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. I which is compulsory and selecting two questions from each Unit.

x-x-x

I.   Attempt the following:-

    i)   Specify the size of data, address, memory word and memory capacity of 8085 microprocessor.

    ii) State the function of given 8085 instructions: JP, JPE, JPO, JNZ.

    iii) What is the difference between JUMP and CALL?

    iv) How is PUSH B instruction executed?

    v)   Find the status after the execution. Highlight the operating mode of 8254. (5x2)

UNIT – I

II.   Draw the architectural diagram of 8085 microprocessor and list out the following-

    i)   General Purpose Registers

    ii) Special Purpose registers with their functions

    iii) Flags in the flag register with required explanation

III. a) Explain the purpose of the following signals in 8085

    i)   READY

    ii) AD0-AD7

    iii) HOLD

    iv) IO/M

    v)   INTR

    b) With timing diagram, explain the memory read operation in 8085 microprocessor.

IV.   What do you mean by counter? Design modulo ten Synchronous counter with the help of T-Flip Flop.   (10)

UNIT – II

V. Calculate the total T-states and Count required for total time delay of 4 msec in the following loop, assuming the system clock is 0.75 μ. (Show intermediate Steps)

	MVI D,00H	7T
NEXT:	DCR D	4T
	MVI C, 50H	7T
DELAY:	DCR C	4T
	JNZ DELAY	10T
	MOV A, D	4T
	OUT PORT#	10T
	JMP NEXT	10T

(10)

VI. a) What do you mean by interrupts? Explain different type of interrupts.

b) Give the name of program instructions and explain any two.   (5,5)

VII. What is DMA? Which hardware pins are used for DMA control? Draw and explain the architecture of 8257 DMA controller.   (10)

x-x-x