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B. Tech. (Sem. - 4th)

MICROPROCESSORS AND ASSEMBLY LANGUAGE PROGRAMMING

SUBJECT CODE : CS - 208

Paper ID : [A0461]

[Note: Please fill subject code and paper ID on OMR]

Time : 03 Hours **Maximum Marks : 60**

Instruction to Candidates:

1) Section A is **Compulsory.**
2) Attempt any **Four** questions from Section - B.
3) Attempt any **Two** questions from Section - C.

Section - A

Q1) *(10 × 2 = 20)*

a) Explain INTR and TEST signal of 8086.

b) What is power saving option of 8051?

c) Compare call and jump instructions of 8085.

d) Write branching instructions of 8085.

e) List some of the errors recognized by 8251.

f) Draw the timing diagram of I/O write machine cycle.

g) Why data bus is bidirectional while address bus is unidirectional in a typical microprocessor?

h) What is the difference between memory mapped and I/O mapped I/O?

i) What is cycle stealing and block transfer in DMA?

j) What is PROM programming?

Section - B

(4 × 5 = 20)

Q2) Explain the interrupt driven data transfer techniques in 8085.

Q3) Explain the different registers used in 8251 USART IC.

Q4) Draw and explain the format of SIM instruction.

Q5) Differentiate between following instructions:

(a) STA address and STAX rp.

(b) LXI, H 2000H and LHLD 2000H.

Q6) Explain the addressing modes of 8086.

Section - C

(2 × 10 = 20)

Q7) Explain organization of 8051 microcontroller with its block diagram. Also explain SFRs.

Q8) Draw interface diagram of 16 key matrix keyboard. Draw the flow chart of :

(a) To find out the depressed key.

(b) To generate position code for this key

Q9) Write detailed note on evolution of microprocessor.

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