

Roll No.

Total No. of Questions : 09]

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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?

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Section - B

$(4 \times 5 = 20)$

- 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

$(2 \times 10 = 20)$

- 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.

