Roll No. ....   **Total No. of Pages : 02**

Total No. of Questions : 09

B.Tech.(CSE/IT) (Sem.–4)
MICROPROCESSOR AND ASSEMBLY LANGUAGE
PROGRAMMING
Subject Code : CS-208
Paper ID : [A0461]

Time : 3 Hrs.   **Max. 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   **(10 × 2 = 20 Marks)**

1.   a) What is program counter and why is it required?

b)   What is the need of address bus in microprocessor?

c)   Give the contents of status flag register of 8085.

d)   What do you understand by synchronous data transfer?

e)   Differentiate between PUSH and POP instructions.

f)   How does microprocessor differentiate between data and instructions?

g)   List the functions of 8251.

h)   What do you understand by emulator?

i)   List 2 differences between 8085 and 8086 micro process.

j)   Write advantages of assembly language in comparison with high level language.

SECTION-B   **(4 × 5 = 20 Marks)**

2.   Draw the block diagram of 8085 and explain the function of each pin.

3.   Explain the format and functions of RIM, SIM and DAA instructions of 8085.

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4. Discuss various types of data transfer schemes used in 8085 based system. Also explain all signals associated with DMA controller.

5. Describe the sequence of events that occurs when non-vectored interrupts occurs in 8085.

6. Differentiate between instruction cycle and machine cycle.

SECTION-C   **(2 × 10 = 20 Marks)**

7. Write an assembly language program and also draw the flow chart to count from 0 to 9 with a one second delay between each count. At the count of 9, the counter should reset itself to zero and repeat the sequence continuously. The clock frequency of the microprocessor is 1MHz.

8. Interface following memory chips with 8085 :

   a) 3 chips of 16K*8 EPROM

   b) 3 chips of 4K*8 RAM

   c) 4 chips of 1K*8 RAM

   Also derive the addresses for each chip.

9. Write short notes on the following :

   a) Instruction set of 8086.

   b) Applications of microprocessor.

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