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 consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.**

SECTION-A

1. **Answer briefly :**

   a) What is flag register in Motorola MC 68000?

   b) Why matrix keyboards are preferred when more numbers of keys are to be interfaced?

   c) Explain SET BOC and ADD A, @ R_o instruction of 8051.

   d) Compare microprocessor with microcontroller.

   e) Compare NOP and HALT of 8085.

   f) What operation does following instructions perform in 8085:

      a. XRI   FFH

      b. ANI   FFH

   g) List two instructions to set all the bits of accumulator to one in 8085.

   h) What is synchronous and asynchronous communication?

   i) Describe the functions of stack pointer in 8085.

   j) What does DMA stand for? Which signals of 8085 are used for DMA transfer?

SECTION-B

2. What is the difference between instruction cycle, machine cycle and clock cycle?

3. Describe serial and parallel data transfer techniques.

4. Explain the function of following pins:

   a) C/D

   b) TXE

   c) RESET

   d) SYNDET/BRKDET

5. Explain and differentiate between simulator and emulator.

6. What is pipelining and how it is achieved in 8086 microprocessor?

SECTION-C

7. Draw and explain the block diagram of microprocessor based traffic control system. Also draw flow chart showing working of the system.

8. Explain the classification of the instruction set of 8085 with suitable example.

9. Draw the neat diagram of 8251 USART and explain in detail.