OR

(b) Discuss with examples, the following 8085 instructions : (CO2)

(i) PUSH

(ii) XRA

(iii) DAA

(iv) CMA

H Roll No. 2194026

TCS–403

B. TECH. (CSE)
(FOURTH SEMESTER)
MID SEMESTER
EXAMINATION, April, 2023
MICROPROCESSORS
Time : 1½ Hours
Maximum Marks : 50

Note : (i) Answer all the questions by choosing any *one* of the sub-questions.

(ii) Each sub-question carries 10 marks.

1. (a) Draw the programming model of 8085. Discuss all 8085 registers. (CO1)

OR

(b) (i) Why 8085 is called an 8-bit microprocessor ?

(ii) Explain why the total addressable memory size in 8085 is limited to 64 kilobytes.

(iii) Discuss the role of ALE signal of 8085. (CO1)

P. T. O.

2. (a) Explain the function of following pins of 8085 : (CO1)

    (i) SID

    (ii) X_1, X_2

    (iii) RST 7.5

    (iv) S_0, S_1

OR

(b) Discuss, with a suitable example, how the interfacing circuit is designed to connect memory with 8085. (CO1)

3. (a) Determine the contents of accumulator and status of all flags for each of the following operations performed by the ALU of 8085 : (CO1)

    (i) $(F7)_H + (A8)_H$

    (ii) $(8D)_H - (5E)_H$

OR

(b) What do you mean by address bus, data bus, and control bus of microprocessor ? Draw the circuit for generation of memory read, memory write, I/O read, I/O write control signals. (CO1)

4. (a) What is the difference between vectored and non-vectored interrupts of 8085 ? Discuss how 8085 processes a non-vectored interrupt request. (CO2)

OR

(b) Twelve bytes are stored in contiguous memory locations starting at address 20F0H. Write an 8085 assembly language programme to find the greatest byte. Store the result at address 30F0H. (CO2)

5. (a) For each of following instructions, name the addressing mode and mention the instruction size (bytes) : (CO2)

    (i) LDAX D

    (ii) SUB C

    (iii) STA 4FF0H

    (iv) MVI D, 80H

Also draw the timing diagram of an opcode fetch cycle taking a suitable example.