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Roll No.

TCS-403

**B. TECH. (CSE)
(FOURTH SEMESTER)**

MID SEMESTER EXAMINATION, 2021

MICROPROCESSORS

Time : 1½ Hours

Maximum Marks : 50

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

(ii) Each question carries 10 marks.

1. (a) Discuss the 8085 bus architecture. Why address bus is unidirectional while the data bus is directional ? 10 Marks (CO1)

OR

- (b) Write an 8085 programme to add 10 bytes stored in contiguous memory locations starting at address 3030H. Store the 16 bit result at 3050H and 3051H address.

10 Marks (CO3)

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2. (a) Draw the timing diagrams for opcode fetch cycle and memory read cycle of 8085. 10 Marks (CO2)

OR

- (b) Discuss the following pins of 8085 :

10 Marks (CO2)

- (i) INTR
- (ii) TRAP
- (iii) INTA
- (iv) SOD
- (v) ALE

3. (a) Write down the addressing modes of 8085.

Explain each mode with the help of an example. 10 Marks (CO2)

OR

- (b) WAP to add two 16-bit numbers 1234H & ABCDH and finally store the 16-bit results 3060H & 3061H. 10 Marks (CO3)

(3)

4. (a) Explain in detail, the concept of Interrupts in 8085. Why TRAP is called a non-maskable interrupt. 10 Marks (CO2)

OR

- (b) Assume accumulator A = FF H and register B = E9H. Determine the accumulator contents and status of all 8085 flags when instruction ADD B is executed. 10 Marks (CO2)

5. (a) (i) Explain the various rotate instructions in 8085.

(ii) Assume accumulator contains the data 43H. Determine the contents of accumulator after execution of four successive RRC instructions. 10 Marks (CO2)

OR

- (b) Write an 8085 programme to move a block of ten bytes, stored in contiguous memory locations starting at an address 3000H to a new memory block starting at an address 3050H. 10 Marks (CO3)

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