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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)