2021

Computer Science

[HONOURS]

(CBCS)

(B.Sc. Fifth Semester End Examination-2021)

PAPER-DSE1T

Full Marks: 60   ***Time: 03 Hrs***

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

Group A

1. **Answer any FIVE questions of the following:**   **5x2=10**

   a) Arrange the following input signals of 8085 in ascending order according to their priority TRAP, RST6.5, HOLD

   b) What is the interrupt service routine (ISR) address of RST 5.5?

   c) What should be the status of s_1, s_0 signals during opcode fetch machine cycle?

   d) What is the function of auxilary carry flag?

   e) What will be the contant of H-L register pair if following ALP code segment is executed in sequence?

   LXI   H, 2255_H
   LXI   B, 1234_H
   DAD   B

f) What will be status of sign flag and zero flag after execution of following two instructions in sequence?

MVI   A,   FF

ADI 01_H

g) What is the function of READY pin of 8085?

h) What is the word length of 8085?

Group B

Answer any FOUR questions of the following: 5x4 = 20

2. Suppose initially all flags of 8085 are 1. Show the status of each flag often execution of following instructions.

MVI   A,   F1

MOV   B,   A

ADD   B

INR   B

3. Write an 8085 ALP to find maximum of two numbers present in C and D registers. Store the maximum number in B register.

4. Describe briefly about 8085 control signals $IO/\overline{M}$, S_1, S_0, ALE, HOLD.

5. Describe briefly about the following 8085 instructions XCHG, PCHL, JNC, CALL, INX.

6. Draw timing diagram of ADD H instruction.

7. List out five differences between memory mapped I/O and standard I/O.

Group C

Answer any ONE questions of the following: 10x1 = 10

8. a) Design an interfacing circuit between 8085 and 4K memory. Show the circuit and resultant memory-map.

b) Write an 8085 ALP to find gray code of 8-bit number stored in memory location $F200_H$ 7+3

9. a) Write an assembly language program to sort a set of ten 8-bit numbers in ascending order.

b) What do you understand by linear addressing?

c) What is fold-back space?   6+2+2