EXPERIMENT NO: 5

PART A: WRITE AN 8085 ASSEMBLY LANGUAGE PROGRAM TO FIND THE MAXIMUM FROM TWO 8-BIT NUMBERS.

PROGRAM:

```
        MVI A,00H
        LXI H,4201H
        MOV A,M

LOOP:   INX H
        CMP M
        JNC AHEAD
        MOV A,M

AHEAD:  STA 4203H
        HLT
```

OBSERVATION:
        Input: 4201H: 09H
                4202H: 30H
        Output: 4203H: 30H

PART B: WRITE AN 8085 ASSEMBLY LANGUAGE PROGRAM TO GET THE MAXIMUM FROM BLOCK OF N 8-BIT NUMBERS.

ALGORITHM:
1. Load the address of the first element of the array in HL pair.
2. Move the count to B register.
3. Increment the pointer.
4. Get the first data in Accumulator.
5. Decrement the counter.
6. Increment the pointer.
7. Compare the content of memory addressed by HL pair with that of Accumulator.
8. If carry=0, go to step 10 or if carry=1, go to step 9.
9. Move the content of memory addressed by HL to Accumulator.
10. Decrement the count.
11. Check for zero of the count. If ZF=0, go to step 6, or if ZF=1, go to next step.
12. Store the largest data in memory.

13. Terminate the program.

PROGRAM:

```
       MVI C,04H
       MVI A,00H
       LXI H,4201H
       MOV A,M

LOOP:  INX H
       CMP M
       JNC AHEAD
       MOV A,M
       DCR C
       JNZ  LOOP
       STA 4206H
       JMP LAST

AHEAD:        DCR C
       JNZ LOOP
       STA 420AH

LAST:  HLT
```

OBSERVATION:
      Input: 4201H: 20H
              4202H: 05H
              4203H: 09H
              4204H: 30H
              4205H: 23H
    Output: 420AH: 30H

CONCLUSION: