NAME:- KRUNAL RANK

ADM. NO:- U18CO081

B-TECH 3RD YEAR

U18CO081

7/9/20

# MIT Tutorial 3

Ans 1: After executing the code, the following are the contents of SP and HL pair:-

- SP = 27FFH
- HL = 4209H

Ans 2:

1: When the counter reaches 109H, the value of accumulator is:-

A = 20h - Value at 0701H
= 20h - 20h
= 00 = 0h

2: After execution of subsequent instructions,

A = 0h (or) 40h = 40h
A = 40h + 20h = 60h

Ans 3: The program can be completed as:-

```
        MVI A, 00H
LOOP:   ADD B       //Add B to Accumulator
        DCR C       //Decrement C by 1
        JNZ Loop    //Jump to loop if Zero flag is not set
        HLT
        END
```

Ans 4:- The required program is:-

```
LXI H, 0050H
PUSH H
POP PSW
```

Ans 5:-

```
LXI H, 205AH
LXI D, 2080H
MVI B, 0006H
loop: MOV A,M
      XCHG
MOV M,A
XCHG
DCX H
INX D
DCR B
JNZ loop
HLT
```

Ans 6:-

| | A | H | L | S | Z | CY | M/200 |
|---|---|---|---|---|---|---|---|
| LXI H,2055H | 0 | 20 | 55 | 0 | 0 | 0 | 0 |
| MVI M,8AH | 0 | 20 | 55 | 0 | 0 | 0 | 8A |
| MVI A,76H | 76 | 20 | 55 | 0 | 0 | 0 | 8A |
| ADD M | 0 | 20 | 55 | 0 | 1 | 1 | 8A |
| STA 2055H | 0 | 20 | 55 | 0 | 1 | 1 | 0 |
| HLT | 0 | 20 | 55 | 0 | 1 | 1 | 0 |

Ans 7:

a) The given code is used to find maximum value among the values stored in three consecutive memory locations.

b)

i) The values are:-

A = 2BH
B = 2BH
CY = 1 C=0
Z = 1
H = 20H
L = 02H

ii) The carry and zero flags are both set.

iii) 2000H → 18H
2001H → 10H
2002H → 2BH
2100H → 2BH

| | M(2000H) |
|---|---|
| Y | 0 |
| D | 8A |
| D | 8A |
| D | 8A |
| 1 | 0 |
| 1 | 0 |
| 1 | 0 |

Ans 8: The contents of given registers are:-

PC:- 3001H
SP:- 0FFEH
B:- ~~42H~~ ~~30~~ 20h
C:- ~~10H~~ 00h
H:- 2FH
L:- 38H