Assignment-2

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1. Draw the timing diagram of MOV A,B , MVI B,45H, IN 01H, OUT40H, LDA 4000H, STA 3000H instructions.
2. Define instruction cycle, machine cycle, and T-states.
3. Describe the instructions according to size with examples.
4. Classify the instructions according to following categories: Arithmetic operation, Logical operation, Data transfer operation, Branching operation, Control operation

Assignment-3

1. WAP to load all register with your class roll number immediately.
2) WAP to add 20 bytes of data stored in memory with starting address of 5050H.
3) WAP to add 10 bytes of data and store the 16-bit result at the end of memory address
4) WAP to transfer the 20 bytes o f data stored in memory having starting address of 2012H to the next memory having starting address of 8000H in reverse order.
5) WAP to multiply the 10H and 14H and show the 16 bit result through any port.
6) WAP to count the positive and negative numbers among 20 bytes of data.
7) There are two tables having 10 data each, WAP to add corresponding numbers and show the result through 00H port.
8) There are 10 numbers in the memory, WAP to add only positive numbers and show the result at outport ports 80H.
9) WAP to count the even or odd numbers among 10 bytes of data stored in memory.
10) WAP to count the no. of 1 present in a byte, assume any byte.
11) WAP to find the largest number among 50 bytes of data stored in memory.
Q) WAP to find the smallest number among 50 bytes of data stored in memory.
12) Explain the 8085 instructions according to the size with examples.
13) Data is stored from 4050H to 405AH . Insert 5 data after 4055 taking from 4040H , but do not lose the previous content.
14) Transfer ten bytes data from 5050H to 5060H only if data is between 30H and 70H else store 00H in the next table.
15) Explain the given instructions with example: LHLD , SHLD, XCHG, RLC,RRC,RAL,RAR.
16) There are address of C000H to C009H where data are stored . WAP in 8085A how many times the data 07H is repeated in the given array of data and store the result at address C004H.
17) WAP to display data between 50H to 80H.
18) What is the value of accumulator and carry flag when following instructions are executed.

MVI A, C5H	MVI A, A7H
ORA A	ORA A
RAL	RAR
RRC	RAL

19) What is the value of register and flag as the following instructions are being executed.

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MVI A, 80H
ORA A
RAR
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20) What will be the content of C registers show each step clearly.

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MVI A, 08H
MVI B, 07H
ADD B

ANI 40H
ORI FEH
ADI 01H
INR A
MOV C, A
HLT
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```
MVI A ,7FH
MVI B, 08H
MVI D,00H
BACK:  RLC
       JNC NEXT
       INR D
NEXT:  DCR B
       JNZ BACK
       MOV C, D
       HLT
```