(8085)

Q If the contents of A = 37H and B = 57H. Determine the status of flag registers if ADD B instruction is executed?

Ans:

A = 0011 0111
B = 0101 0111
1000 1110

ADD B
↳ A ← (A) + (B)

AC = 0
CY = 0
Z = 0
S = 1
P = 1

MSB of result = Sign flag.

CY flag
Carry flag is equal to the carry value produced during addition or subtraction of two nos.

AC flag
Auxiliary flag = the carry generated from lower 4 bit to upper 4 bit.

* Parity flag of 8085
  P = 1 when even no of 1s are there in result
  P = 0 when odd no of 1s are there in result.
* Sign flag of 8085
  S = MSB value of result
* Zero flag of 8085
  Z = 1 if a result = 0 is produced
  Z = 0 if a non-zero result is produced

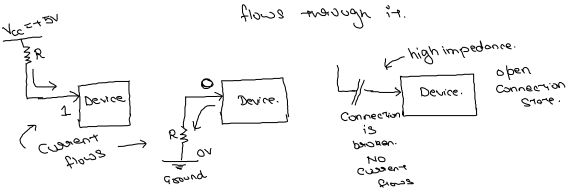
Q How many instructions are there in 8085 instruction set?

Ans: 74 Instructions

Q What do you mean by a tri-state device?

Ans: Device having 3 states: 0, 1, high impedance.

High impedance → is the state when the device is disconnected means no current flows through it.



Q What is an Assembler?

Ans → Assembler is a program (software) which converts assembly language program to machine language program.

Assembly prog.
↓
is not understood by any μP we write in assembly for us to make writing reading & debugging easy.

↓
understood by μP but not easy to write, read or debug for programmer.

Q What is the difference between operand and opcodes?

Ans: Opcode → means operational code. which tells the μP, what operation is to be performed.

Operand → is the data on which the operation has to be performed.

For eg: MOV A, B

MOV is opcode → which tells the μP to perform data transfer from source to destination.

A, B is operand → which tells the μP the source data is in register B destination data is in register A

Q: How the μP works?

Ans: The μP performs:
1. Fetch
2. Decode
3. Execute

Fetch data and instructions from memory
Decode the fetched instructions.
Execute the instruction based on decoding.