

4th

Dec

(c)

LXI

RP

Rp, 2 bytes data

(Load Register pair)

↳ 3-byte instⁿ

↳ loads immediate data to register pair

• Register pair

- BC (B)
- DE (D)
- HL (H)
- SP (Stack ptr)

1st byte → op-code

2nd byte → lower order data

3rd byte → higher order data

EG: LXI D, 4080H

↳
DE pair

D ← 40 H

E ← 80 H

⑥ MVI m, data (load memory immediate)

↳ 2 byte instruction

↳ loads 8 bit data to the memory location

address specified by
contents of HL pair

eg: MVI m, 35H

H = 40H

L = 00H

[HL] ← 35H

Address	Data
4000H	35H

initialize 1st memory location

⑦ LDA 16 bit address (load accumulator direct)

↳ 3 byte instrⁿ

↳ loads accumulator w. contents of memory location whose address is specified by 16 bit address.

• **EG:** LDA 3050H

$A \leftarrow [3050H]$

↓
yes ma 11H data xa vane
A ma 11H 1000 hunxa

④ **LDA R_p** (load accumulator indirect)

↓
Reg pair → ONLY FOR { BC, DE } pairs

≠ HL pair

✓ 4 1 byte instrⁿ
code le rep garne milxa

↳ loads contents of memory location pointed by contents of register pair to accumulator.

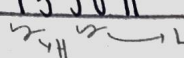
• **EG:** LDA B // $A \leftarrow [BC]$

↓
ye location point
garne data is in A

LXI D, 8000H // D = 80, E = 00

LDA D // $A \leftarrow [8000] \rightarrow 22H$

1. Load accumulator w. content of 4550H using HI pair (M)

LXI H, 4550H


MOV A, M

Reg ← Memory

HIT

(i) STA 16-bit address (store accumulator contents direct)

↳ 3 byte instⁿ

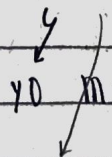
↳ stores content of A to specified address

• Eg:

STA 3A55H

↗ 22H

[3A55] ← [A]

⚡


yo memory location ma A ko data rakhne ho

22H

Note: LDAX } ONLY for • BC
STAX } • DE

≠ HL pair (not)

① STAX R_p (store accumulator contents indirect)
↳ direct address: Xaind

↳ 1 byte instrⁿ

↳ stores content of A to memory location specified by content of register pair.

• Eg: STAX B
MVI A, 55H
LXI B, 3545H
STAX B
HLT
BC [3545] → 55H 0000

2. COPY CONTENT of location 2050H to 3050H

ii) using HL pair

LXI H, 2050H ; H=20H, L=50H

MOV A, m

A ← memory

LXI H, 3050H

; MVI H, 30H

MOV m, A

already

as L is 50H in both

HLT mem ← A

1 byte ↓

STA 3050H

W/O USING BC pair

LDA 2050 H

for both

source & destination

iii Using BC pair

LXI B, 2050 H ; B = 20 H C = 50 H

LDAX B A ← [BC]

LXI B, 3050 H ; MVI B, 30 H

STAX B [BC] ← A

HLT

STA 3050 H

3. Exchange content of locations 4000 H & 5000 H

O/P

Address	Data	Address	Data
4000 H	22 H	4000 H	33 H
5000 H	33 H	5000 H	22 H