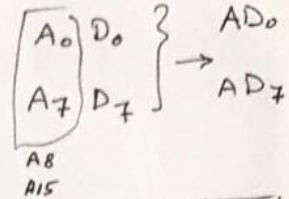
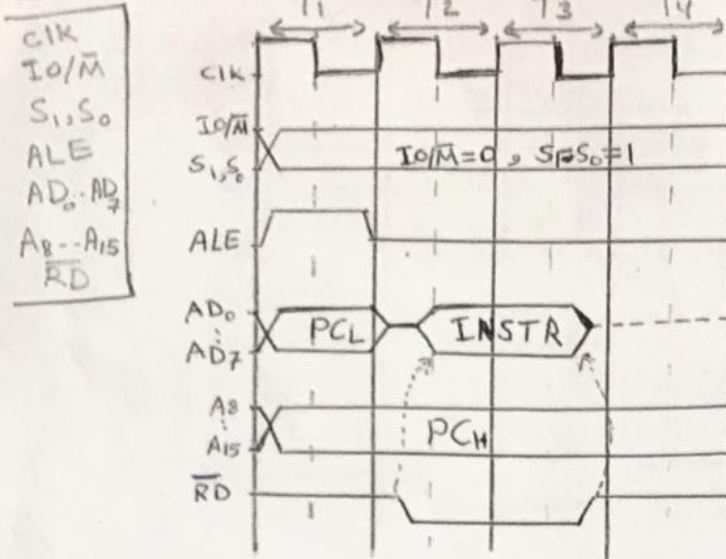
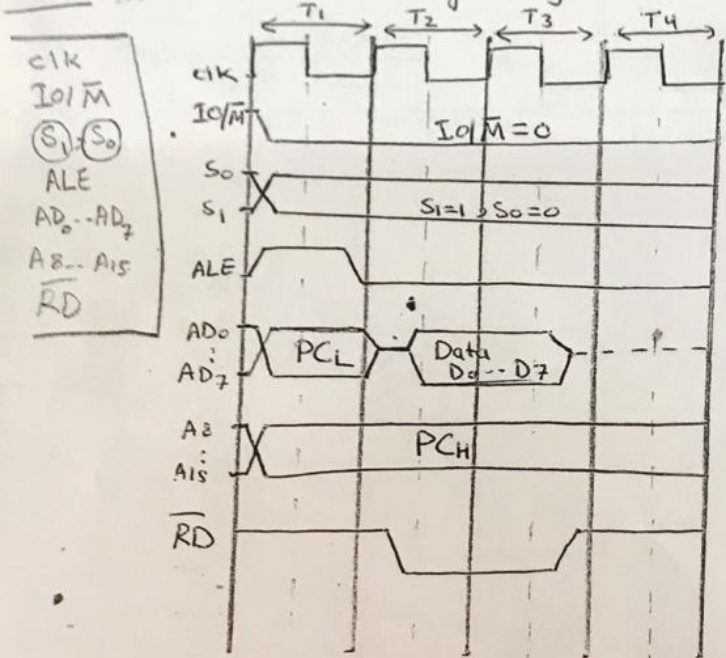


Q1: Draw the timing diagram for opcode fetch



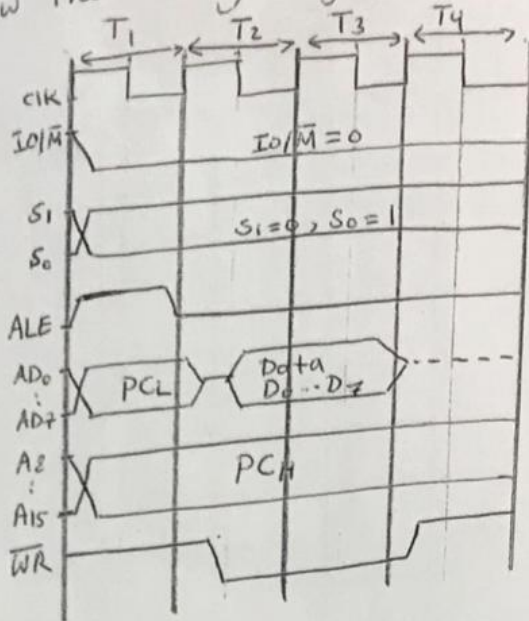
	S <sub>0</sub>	S <sub>1</sub>
opcode field	1	1
Read	0	1
write	1	0

Q2: Draw the timing diagram for Memory Read



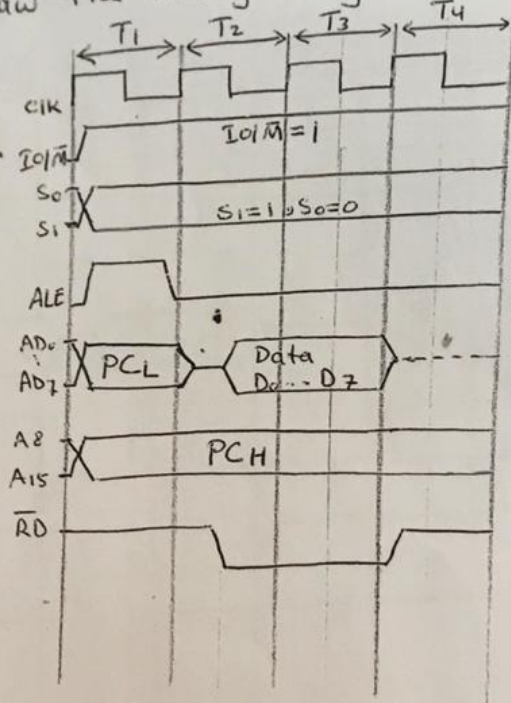
Q3: Draw the timing diagram for Memory Write

- CLK
- $\overline{IO/\overline{M}}$
- $S_1, S_0$
- ALE
- $AD_0 - AD_7$
- $A_8 - A_{15}$
- $\overline{WR}$



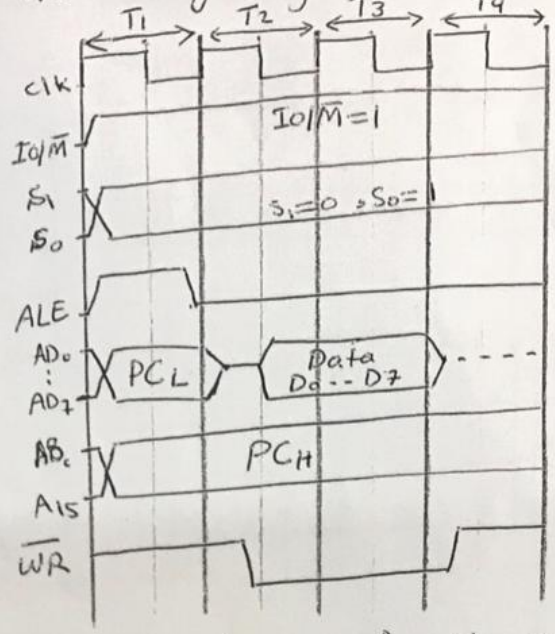
Q4: Draw the timing diagram for IORead

- CLK
- $\overline{IO/\overline{M}}$
- $S_1, S_0$
- ALE
- $AD_0 - AD_7$
- $A_8 - A_{15}$
- $\overline{RD}$

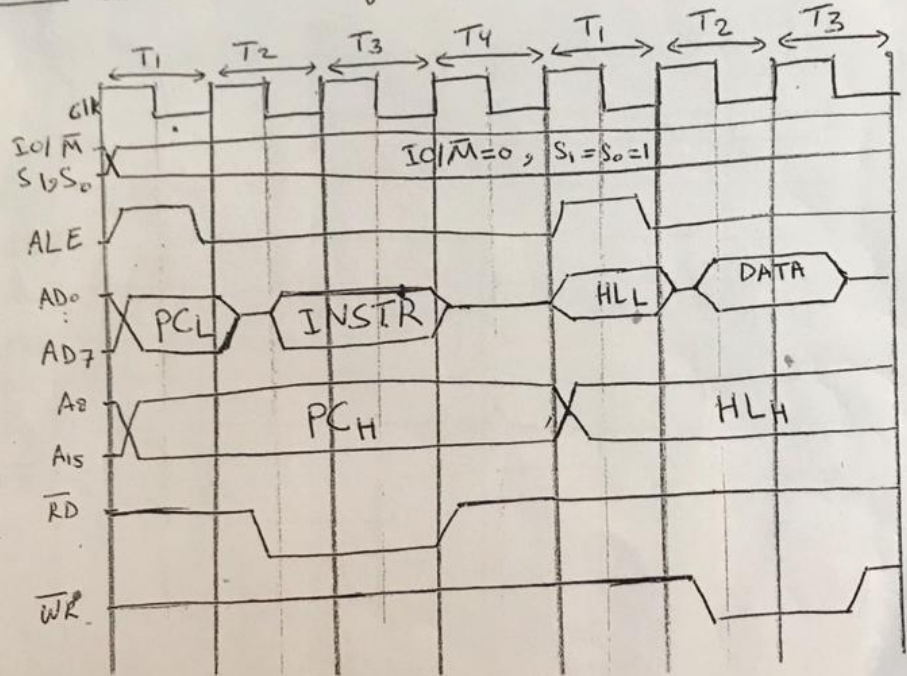


5: Draw the timing diagram for IO Write.

- clk
- IO/M
- S<sub>1</sub>, S<sub>0</sub>
- ALE
- AD<sub>0</sub>..AD<sub>7</sub>
- A<sub>8</sub>..A<sub>15</sub>
- WR

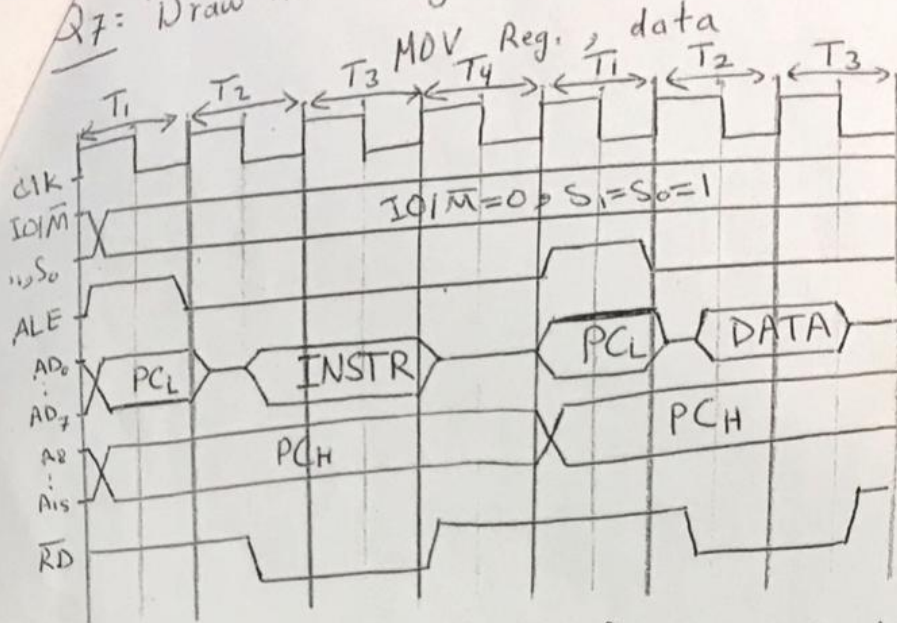


Q6: Draw the timing diagram for the instruction MOV M, reg writing on memory





Q7: Draw the timing diagram for the instruction  $MOV\ reg_i, di$   
Read from memory



Q8: Draw the timing diagram for the instruction  $MOV\ reg_2, reg$

