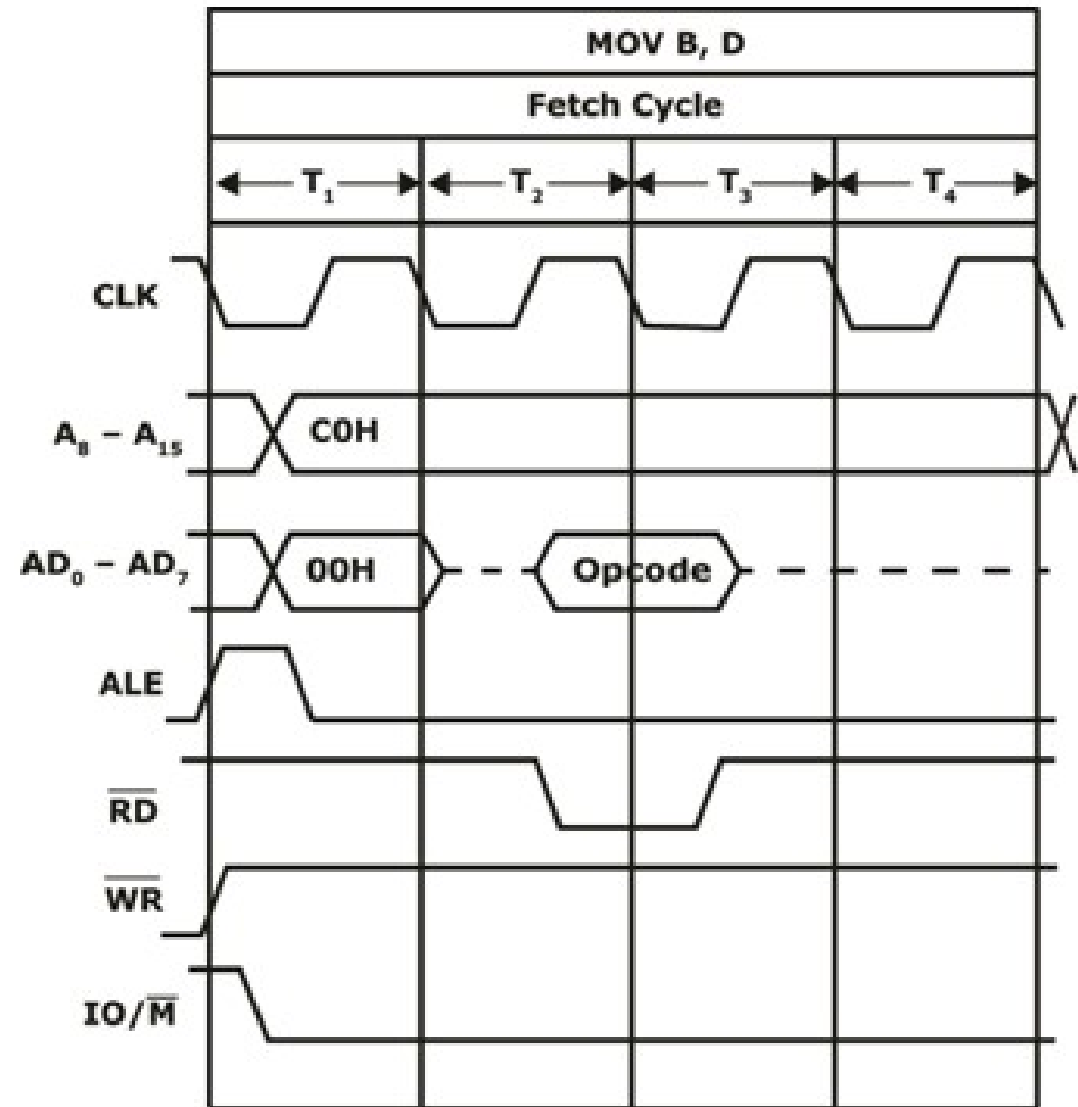


Example (MOV B, D)

C000	OPCODE
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Instruction cycle of MOV B, D	Fetch cycle
T ₁ :	MAR ← PC
T ₂ :	MBR ← [MAR]
T ₃ :	IR ← MBR, PC ← PC + 1
T ₄ :	B ← D

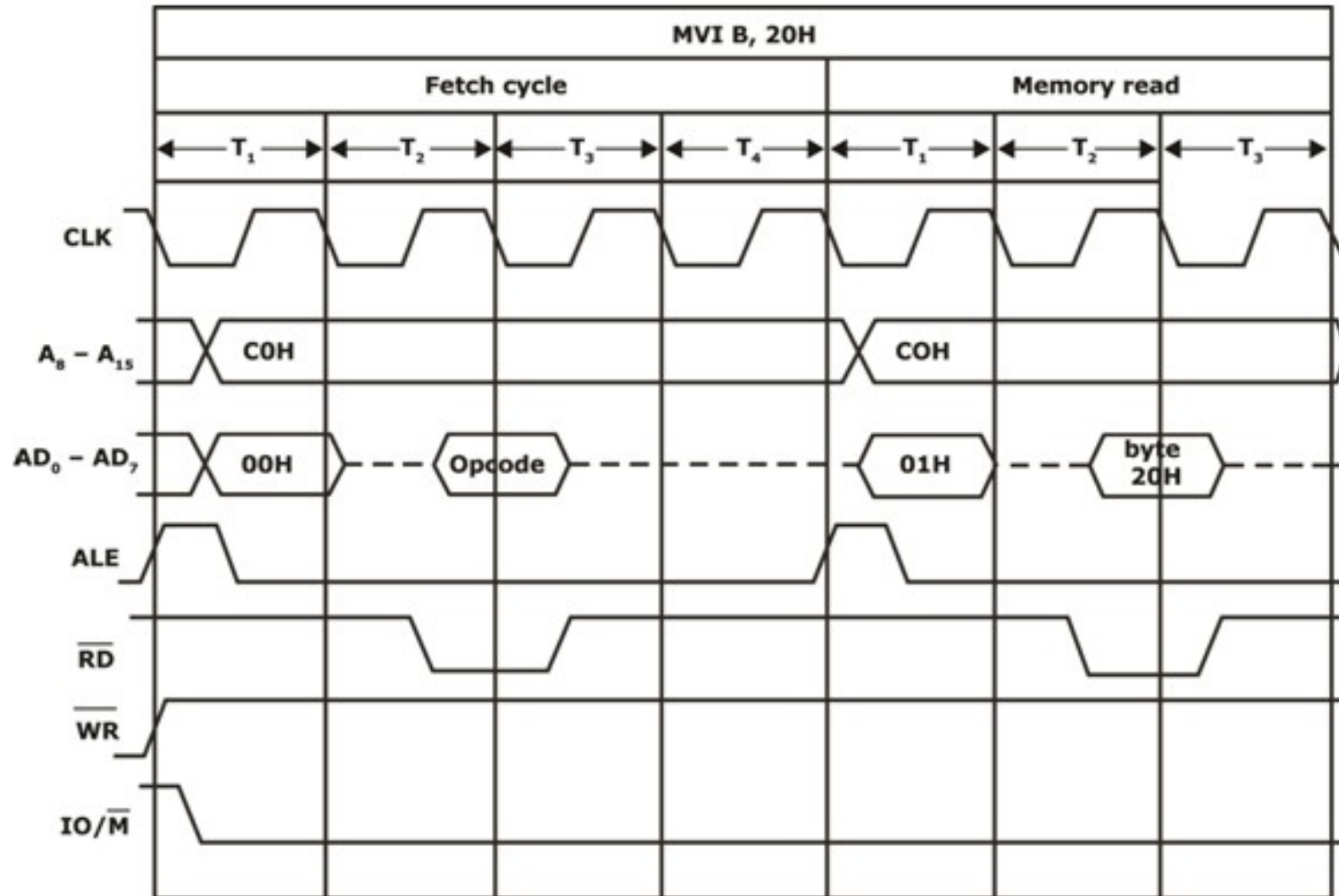


Example (MVI B, 20H)

C000	OPCODE
C001	20

<i>Instruction cycle of MVI B, 20H</i>	<i>Fetch cycle</i>	T ₁ : T ₂ : T ₃ : T ₄ :	MAR ← PC MBR ← [MAR] IR ← MBR, PC ← PC + 1 Unspecified
	<i>Memory Read cycle</i>	T ₅ : T ₆ : T ₇ :	MAR ← PC MBR ← [MAR] B ← MBR, PC ← PC + 1

Example (MVI B, 20H)

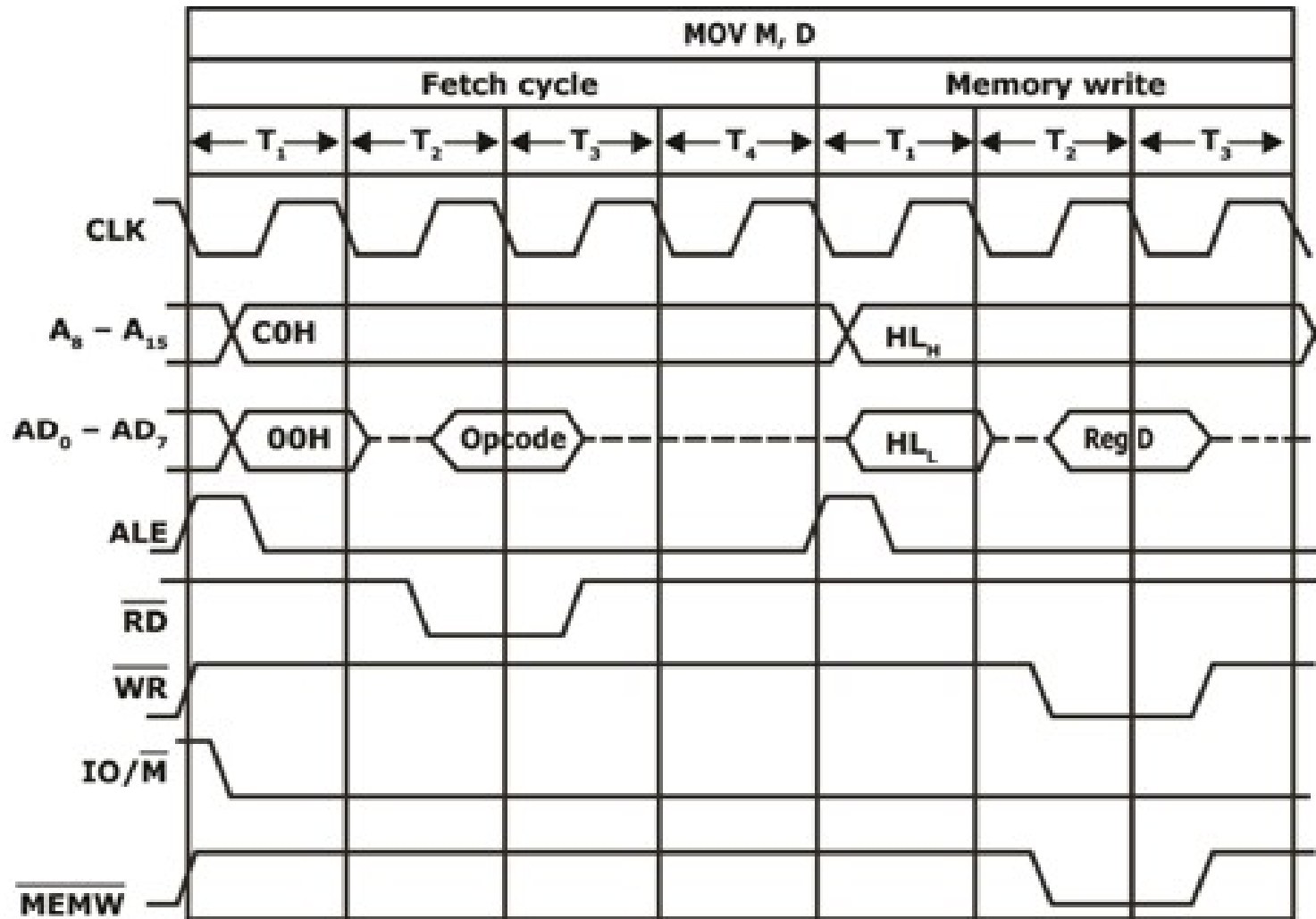


Example (MOV M, D)

C000	OPCODE
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<i>Instruction cycle of MOV M, D</i>	<i>Fetch cycle</i>	T ₁ : T ₂ : T ₃ : T ₄ :	MAR ← PC MBR ← [MAR] IR ← MBR, PC ← PC + 1 Unspecified
	<i>Memory Write cycle</i>	T ₅ : T ₆ : T ₇ :	MAR ← HL MBR ← D [MAR] ← MBR

Example (MOV M, D)

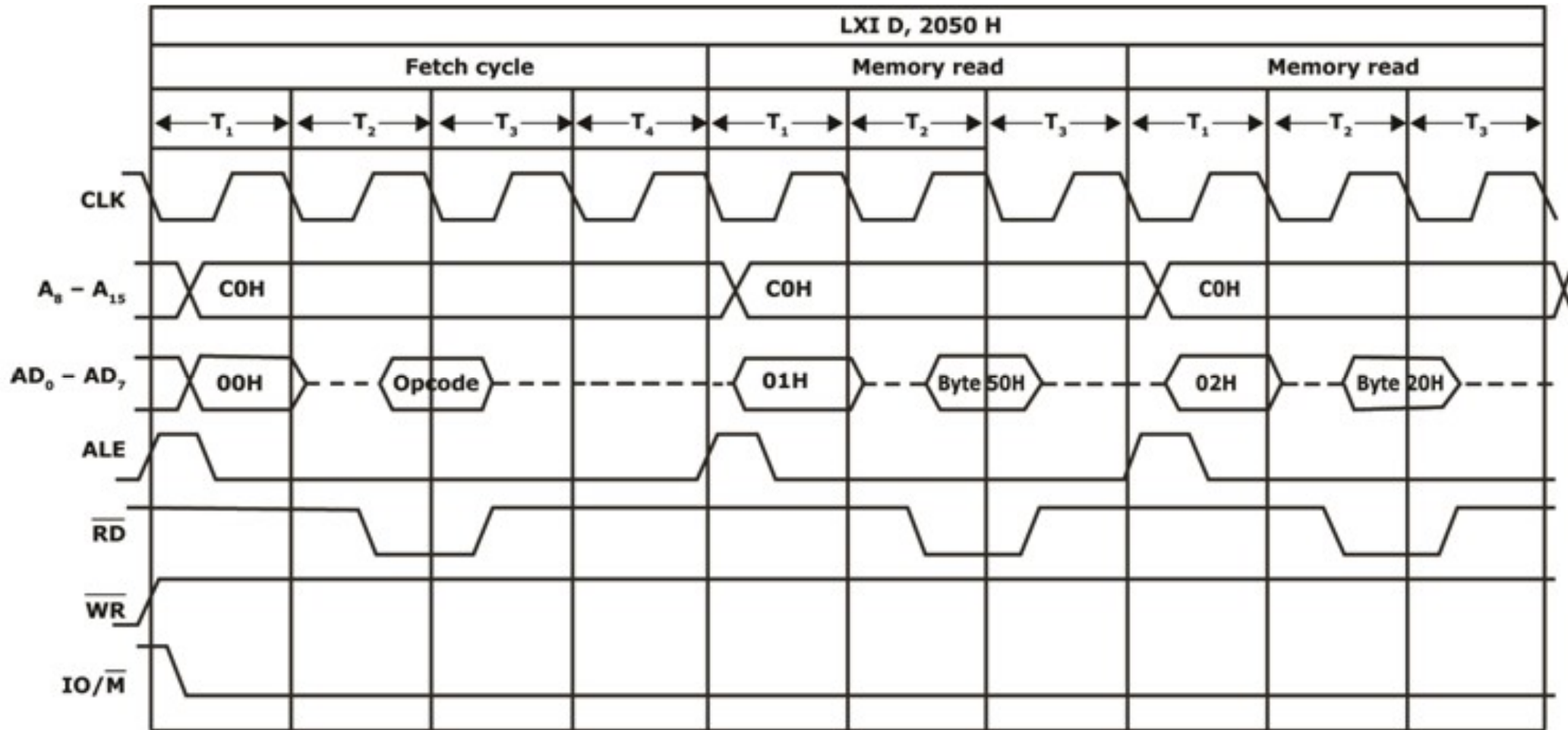


Example (LXI D, 2050H)

C000	OPCODE
C001	50
C002	20

<i>Instruction cycle of LXI D, 2050H</i>	<i>Fetch cycle</i>	T ₁ :	MAR ← PC
		T ₂ :	MBR ← [MAR]
		T ₃ :	IR ← MBR, PC ← PC + 1
		T ₄ :	Unspecified
	<i>Memory Read cycle</i>	T ₅ :	MAR ← PC
		T ₆ :	MBR ← [MAR]
		T ₇ :	E ← MBR, PC ← PC + 1
	<i>Memory Read cycle</i>	T ₈ :	MAR ← PC
		T ₉ :	MBR ← [MAR]
		T ₁₀ :	D ← MBR, PC ← PC + 1

Example (LXI D, 2050H)

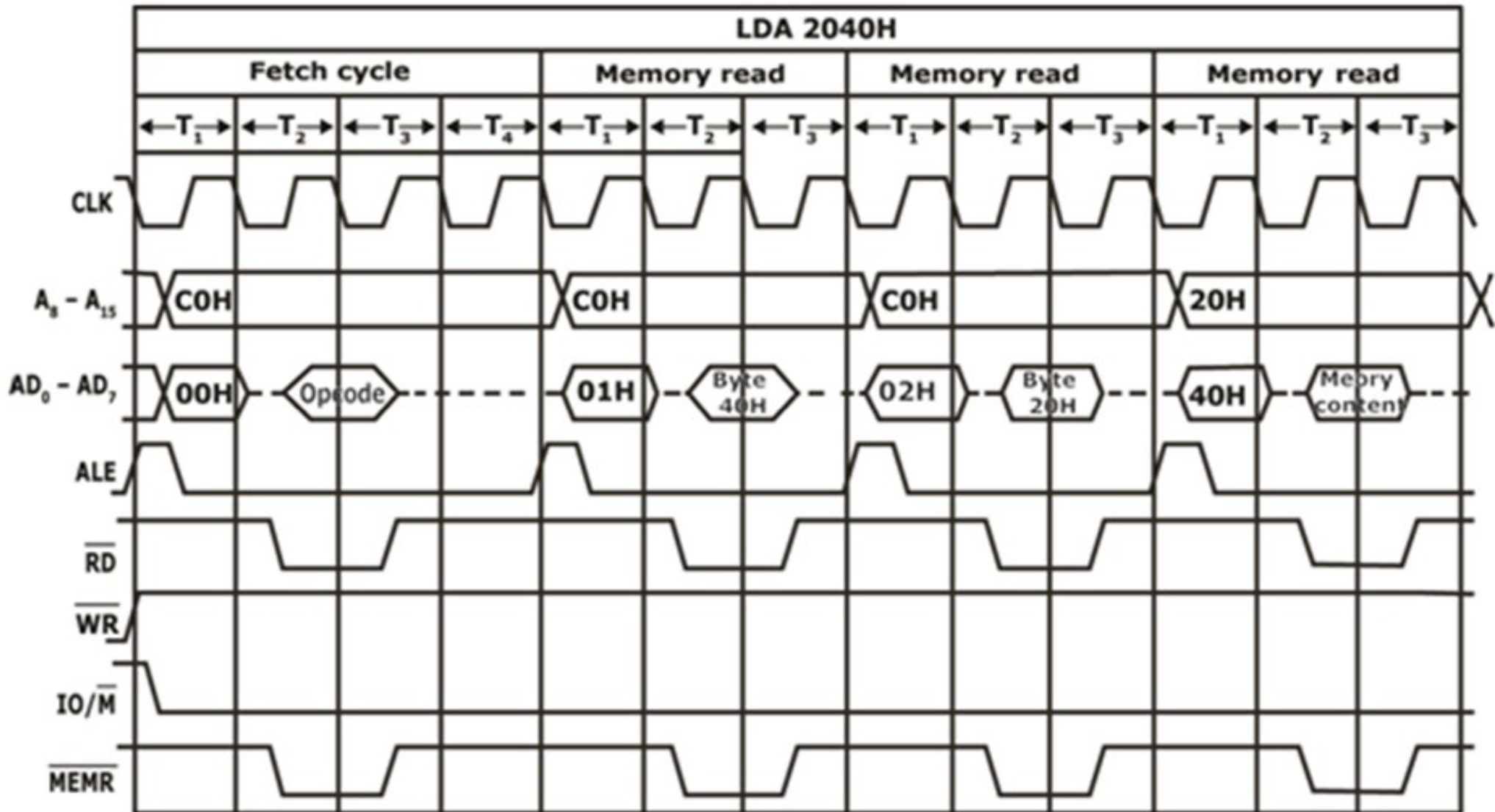


Example (LDA 2040H)

C000	OPCODE
C001	40
C002	20

<i>Instruction cycle of LDA 2040H</i>	<i>Fetch cycle</i>	T ₁ : T ₂ : T ₃ : T ₄ :	MAR ← PC MBR ← [MAR] IR ← MBR, PC ← PC + 1 Unspecified
	<i>Memory Read cycle</i>	T ₅ : T ₆ : T ₇ :	MAR ← PC MBR ← [MAR] Z ← MBR, PC ← PC + 1
	<i>Memory Read cycle</i>	T ₈ : T ₉ : T ₁₀ :	MAR ← PC MBR ← [MAR] W ← MBR, PC ← PC + 1
	<i>Memory Read cycle</i>	T ₁₁ : T ₁₂ : T ₁₃ :	MAR ← WZ MBR ← [MAR] A ← MBR

Example (LDA 2040H)



Example (OUT FOH)

C000	OPCODE
C001	FO

<i>Instruction cycle of OUT FOH</i>	<i>Fetch cycle</i>	$T_1:$ MAR \leftarrow PC $T_2:$ MBR \leftarrow [MAR] $T_3:$ IR \leftarrow MBR, PC \leftarrow PC + 1 $T_4:$ Unspecified
	<i>Memory Read cycle</i>	$T_5:$ MAR \leftarrow PC $T_6:$ MBR \leftarrow [MAR] $T_7:$ Z \leftarrow MBR, PC \leftarrow PC + 1
	<i>I/O Write cycle</i>	$T_8:$ IOAR \leftarrow Z $T_9:$ IOBR \leftarrow A $T_{10}:$ [IOAR] \leftarrow IOBR

Example (OUT F0H)

