Table-1: List of All 8085 Instructions with their Opcodes, operands, instruction Size, Number of Machine Cycles, Number of T-states

Instruction	Op-code	Operand	Bytes	Machine-cycles	T-states	Detail
ACI Instruction	ACI	8 bit data	2	2	7	Add immediate to Accumulator with Carry
ADC	ADC	Reg., Mem.	1,1	1,2	4,7	Add register to accumulator with carry
ADD	ADD	Reg., Mem.	1,1	1,2	4,7	Add register to Accumulator
ADI	ADI	8-bit, data	2	2	7	Add immediate to accumulator
ANA	ANA	Reg., mem.	1,1	1,2	4,7	Logical AND with Accumulator
ANI	ANI	8-bit, data	2	2	7	AND immediate with accumulator
CALL	CALL	16-bit address	3	5	18	Unconditional Subroutine call
CMA	CMA	None	1	1	4	Complement Accumulator
CMC	CMC	None	1	1	4	Complement Carry
CMP	CMP	Reg., Mem.	1,1	1,2	4,7	Compare with accumulator
CPI	CPI	8-bit	2	2	7	Compare Immediate with accumulator
DAA	DAA	None	1	1	4	Decimal Adjust

						Accumulator
DAD	DAD	Reg.Pair	1	3	10	Add register pair to H and L registers
DCR	DCR	Reg., Mem.	1,1	1,3	4,10	Decrement source by 1
DCX	DCX	Reg. Pair	1	1	6	Decrement register pair by 1
DI	DI	None	1	1	4	Disable Interrupts
EI	EI	None	1	1	4	Enable Interrupts
HLT	HLT	None	1	2 or more	5 or more	Halt and enter wait state
IN	IN	8-bit port address	2	3	10	Input data to accumulator from a port with 8-bit address
INR	INR	Reg.,Mem.	1,1	1,3	4,10	Increment contents of register/Memory by 1
INX	INX	Reg. Pair	1	1	6	Increment register pair by 1
JMP	JMP	16 bit	3	3	10	Jump unconditionally
LDA	LDA	16 bit address	3	4	13	Load accumulator direct
LDAX	LDAX	B/D reg. Pair	1	2	7	Load accumulator indirect
LHLD	LHLD	16 bit address	3	5	16	Load H and L registers direct
LXI	LXI	Reg. Pair,	3	3	10	Load Register Pair

		16 bit data				Immediate
MOV	MOV MOV MOV	Rd,Rs M,Rs Rd,M	1	1 2	4 7	Move-copy from source to destination
MVI	MVI	Reg., Data Mem., Data	2 2	2 3	7 10	Move immediate 8 bit
NOP	NOP	None	1	1	4	No Operation
ORA	ORA	Reg., Mem.	1,1	1,2	4,7	Logically OR with Accumulator
ORI	ORI	8 bit data	2	2	7	Logically OR Immediate
OUT	OUT	8-bit port address	2	3	10	Output Data from Accumulator to a port with 8 bit address
PCHL	PCHL	None	1	1	6	Load program counter with HL contents
POP	POP	Reg. pair	1	3	10	POP OFF Stack to register pair
PUSH	PUSH	Reg. pair	1	3	12	Push register pair into stack
RAL	RAL	None	1	1	4	Rotate accumulator left through carry
RAR	RAR	None	1	1	4	Rotate accumulator right through carry
RLC	RLC	None	1	1	4	Rotate Accumulator Left

RRC	RRC	None	1	1	4	Rotate Accumulator Right
RET	RET	None	1	3	10	Return from subroutine unconditionally
RIM	RIM	None	1	1	4	Read Interrupt Mask
SBB	SBB	Reg., Mem.	1,1	1,2	4,7	Substract source and borrow from accumulator
SBI	SBI	8 bit data	2	2	7	Aubstract immediate with borrow
SHLD	SHLD	16 bit address	3	5	16	Store H and L registers direct
SIM	SIM	None	1	1	4	Set Interrupt Mask
SPHL	SPHL	None	1	1	6 (in 8085), 5(in 8080)	Copy H and L registers to the Stack pointer(SP)
STA	STA	16 bit	3	4	13	Store Accumulator Direct
STAX	STAX	B/D reg. pair	1	2	7	Store Accumulator Indirect
STC	STC	None	1	1	4	Set Carry
SUB	SUB	Reg. , Mem.	1,1	1,2	4,7	Substract register or memory from Accumulator
SUI	SUI	8 bit data	2	2	7	Substract immediate from accumulator
XCHG	XCHG	None	1	1	4	Exchange H and L with D

						and E
XRA	XRA	Reg., Mem.	1,1	1,2	4,7	Exclusive OR with accumulator
XRI	XRI	8 bit data	2	2	7	Exclusive OR immediate with accumulator
XTHL	XTHL	None	1	5	16	Exchange H and L with top of stack