INSTRUCCIONES ARITMETICAS¡ERROR! MARCADOR NO DEFINIDO.

Mnemonic	Description	Hex Code	num bytes	Oscil Cyc	Flags C	OV	AC
ADD A,Rn	Add register to accumulator	28..2F	1	12	X	X	X
ADD A,direct	Add direct byte to accumulator	25	2	12	X	X	X
ADD A,@Ri	Add indirect RAM to accumulator	26..27	1	12	X	X	X
ADD A,#data	Add immediate da-ta to accumulator	24	2	12	X	X	X
ADDC A,Rn	Add register to A with Carry flag	38..3F	1	12	X	X	X
ADDC A,direct	Add direct byte to A with Carry flag	35	2	12	X	X	X
ADDC A,@Ri	Add indirect RAM to A with Carry flag	36..37	1	12	X	X	X
ADDC A,#data	Add immediate data to A with Carry flag	34	2	12	X	X	X
SUBB A,Rn	Subtract register from A with Borrow	98..9F	1	12	X	X	X
SUBB A,direct	Subtract direct byte from A with Borrow	95	2	12	X	X	X
SUBB A,@Ri	Subtract indirect RAM from A with Borrow	96..97	1	12	X	X	X
SUBB A,#data	Subtract immediate data from A with Borrow	94	2	12	X	X	X
INC A	Increment accumulator	04	1	12			
INC Rn	Increment register	08..0F	1	12			
INC direct	Increment direct byte	05	2	12			
INC @Ri	Increment indirect RAM	06..07	1	12			
INC DPTR	Increment Data Pointer	A3	1	24			
DEC A	Decrement accumutor	14	1	12			

DEC Rn	Decrement register	18..1F	1	12			
DEC direct	Decrement direct byte	15	2	12			
DEC @Ri	Decrement indirect RAM	16..17	1	12			
MUL AB	Multiply A x B	A4	1	48	0	X	
DIV AB	Divide A by B	84	1	48	0	X	
DA A	Decimal Adjust Accumulator	D4	1	12	X		

INSTRUCCIONES LOGICAS

		Hex	num	Oscil	Flags		
Mnemonic	**Description**	**Code**	**bytes**	**Cyc**	**C**	**OV**	**AC**
ANL A,Rn	AND Register to Accumulator	58..5F	1	12			
ANL A,direct	AND direct byte to Accumulator	55	2	12			
ANL A,@Ri	AND indirect RAM to Accumulator	56..57	1	12			
ANL A,#data	AND immediate data to Accumulator	54	2	12			
ANL direct,A	AND Accumulator to direct byte	52	2	12			
ANL direct,#data	AND immediate data to direct byte	53	3	24			
ORL A,Rn	OR register to Accumulator	48..4F	1	12			
ORL A,direct	OR direct byte to Accumulator	45	2	12			
ORL A,@Ri	OR indirect RAM to Accumulator	46..47	1	12			
ORL A,#data	OR immediate data to Accumulator	44	2	12			
ORL direct,A	OR Accumulator to direct data	42	2	12			
ORL direct,#data	OR immediate data	43	3	24			

	to direct byte				
XRL A,Rn	Exclusive-OR register to Accumulator	68..6F	1	12	
XRL A,direct	Exclusive-OR direct byte to Accumulator	65	2	12	
XRL A,@Ri	Exclusive-OR indirect RAM to Accumulator	66..67	1	12	
XRL A,#data	Exclusive-OR immediate data to Accumulator	64	2	12	
XRL direct,A	Exclusive-OR Accumulator to direct byte	62	2	12	
XRL direct,#data	Exclusive-OR immediate data to direct byte	63	3	24	
CLR A	Clear Accumulator	E4	1	12	
CPL A	Complement Accumulator	F4	1	12	
RL A	Rotate Accumulator Left	23	1	12	
RLC A	Rotate Accumulator Left through the Carry	33	1	12	X
RR A	Rotate Accumulator Right	03	1	12	
RRC A	Rotate Accumulator Right through the Carry	13	1	12	X
SWAP A	Swap nibbles within the Accumulator	C4	1	12	

INSTRUCCIONES DE TRANSFERENCIA DE DATOS

Mnemonic	Description	Hex Code	num bytes	Oscil Cyc	Flags C	OV	AC
MOV A,Rn	Move register to Accumulator	E8..EF	1	12			
MOV A,direct	Move direct byte to Accumulator	E5	2	12			
MOV A,@Ri	Move indirect RAM to Accumulator	E6..E7	1	12			
MOV A,#data	Move immediate data to Accumula-tor	74	2	12			
MOV Rn,A	Move Accumulator to register	F8..FF	1	12			
MOV Rn,direct	Move direct byte to register	A8..AF	2	24			
MOV Rn,#data	Move immediate data to register	78..7F	2	12			
MOV direct,A	Move Accumulator to direct byte	F5	2	12			
MOV direct,Rn	Move register to direct byte	88..8F	2	12			
MOV direct,direct	Move direct byte to direct	85	3	24			
MOV direct,@Ri	Move indirect RAM to direct byte	86..87	2	24			
MOV direct,#data	Move immediate data to direct byte	75	3	24			
MOV @Ri,A	Move Accumulator	F6..F7	1	12			

	to indirect RAM					
MOV @Ri,direct	Move direct byte to indirect RAM	A6..A7	2	24		
MOV @Ri,#data	Move immediate data to indirect RAM	76..77	2	12		
MOV DPTR,#data16	with a 16-bit constant	Load Data Pointer		90	3	24
MOVC A,@A+DPTR	relative to DPTR to Acc	Move Code byte		93	1	24
MOVC A,@A+PC	Move Code byte relative to PC to Acc	83	1	24		
MOVX A,@Ri	Move External RAM (8-bit addr) to Acc	E2..E3	1	24		
MOVX A,@DPTR	Move External RAM (16-bit addr) to Acc	E0	1	24		
MOVX @Ri,A	Move Acc to External RAM (8-bit addr)	F2..F3	1	24		
MOVX @DPTR,A	Move Acc to External RAM (16-bit addr)	F0	1	24		
PUSH direct	Push direct byte into stack	C0	2	24		
POP direct	Pop direct byte from stack	D0	2	24		
XCH A,Rn	Exchange register with Accumulator	C8..CF	1	12		

XCH A,direct	Exchange direct byte with Accumulator	C5	2	12			
XCH A,@Ri	Exchange indirect RAM with Accumulator	C6..C7	1	12			
XCHD A,@Ri	Exchange low-order Digit indirect RAM with Acc	D6..D7	1	12			

INSTRUCCIONES BOOLEANAS

Mnemonic	Description	Hex Code	num bytes	Oscil Cyc	Flags C	OV	AC
CLR C	Clear Carry	C3	1	12	0		
CLR bit	Clear direct bit	C2	2	12			
SETB C	Set Carry	D3	1	12	1		
SETB bit	Set direct bit	D2	2	12			
CPL C	Complement Carry	B3	1	12	X		
CPL bit	Complement direct bit	B2	2	12			
ANL C,bit	AND direct bit to Carry	82	2	24	X		
ANL C,/bit	AND complement of direct bit to Carry	B0	2	24	X		
ORL C,bit	OR direct bit to Carry	72	2	24	X		
ORL C,/bit	OR complement of direct bit to Carry	A0	2	24	X		
MOV C,bit	Move direct bit to Carry	A2	2	12	X		
MOV bit,C	Move Carry to di-	92	2	24			

	rect bit			
JC rel	Jump if Carry is set	40	2	24
JNC rel	Jump if Carry not set	50	2	24
JB bit,rel	Jump if direct Bit is set	20	3	24
JNB bit,rel	Jump if direct Bit is not set	30	3	24
JBC bit,rel	Jump if direct Bit is set & clear bit	10	3	24

INSTRUCCIONES DE SALTO

Mnemonic	Description	Hex Code	num bytes	Oscil Cyc	Flags C	OV	AC
ACALL addr11	Absolute Subroutine Call	11,31,51 71,91,B1 D1,F1	2	24			
LCALL addr16	Long Subroutine Call	12	3	24			
RET	Return from Subroutine	22	1	24			
RETI	Return from interrupt	32	1	24			
AJMP addr11	Absolute Jump	01,21,41 61,81,A1 C1,E1	2	24			
LJMP addr16	Long Jump	02	3	24			
SJMP rel	Short Jump (relative addr)	80	2	24			
JMP @A+DPTR	Jump indirect relative to the DPTR	73	1	24			

JZ rel	Jump if Accumulator is Zero	60	2	24			
JNZ rel	Jump if Accumulator is not Zero	70	2	24			
CJNE A,direct,rel	Compare direct byte to Acc and Jump if Not Equal	B5	3	24	X		
CJNE A,#data,rel	Compare immediate to Acc and Jump if Not Equal	B4	3	24			
CJNE Rn,#data,rel	Compare immediate to register and Jump if Not Equal	B8..BF	3	24	X		
CJNE @RI,#data,rel	Compare immediate to indirect and Jump if Not Equal	B6..B7	3	24	X		
DJNZ Rn,rel	Decrement register and Jump if Not Zero	D8..DF	2	24			
DJNZ direct,rel	Decrement direct byte and Jump if Not Zero	D5	3	24			
NOP	No Operation	00	1	12			