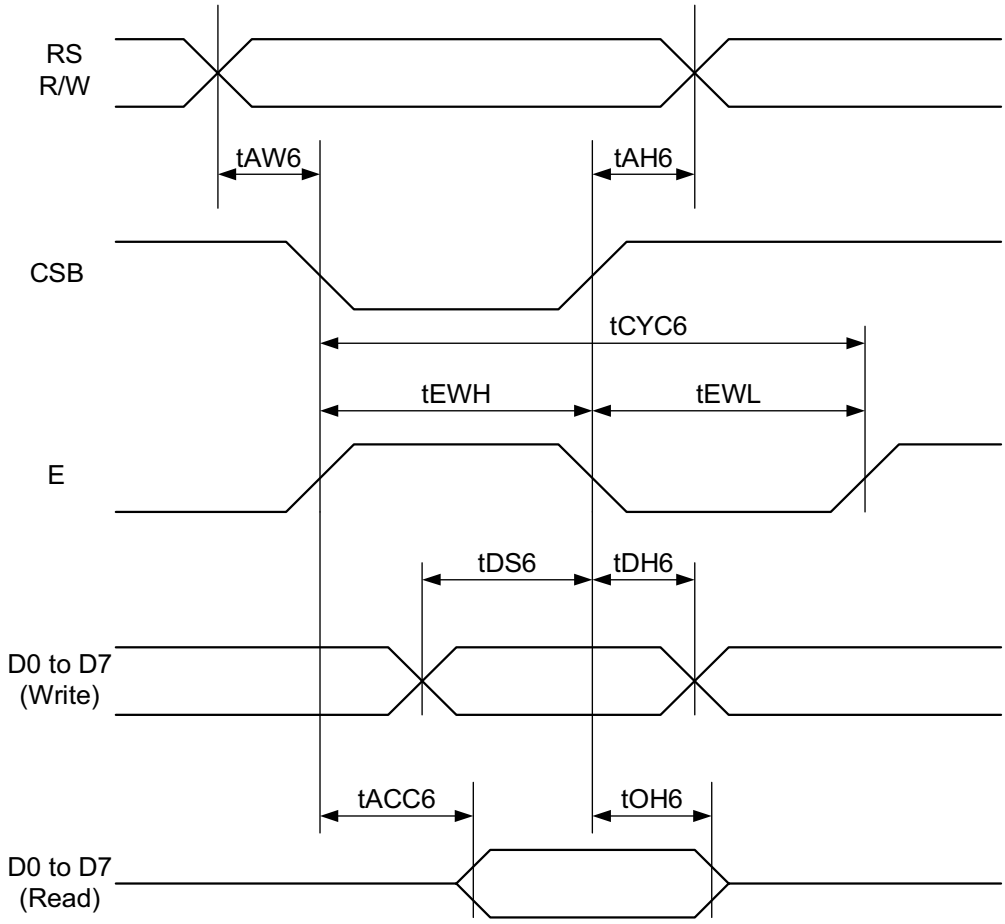
➢ **Initial Program Code Example For 8051 MPU(8 Bit Interface):**

```
;-------------------------------------------------------------------------------
INITIAL_START:
        CALL    DELAY40mS
        MOV     A,#38H          ;FUNCTION SET
        CALL    WRINS_NOCHK     ;8 bit, N=1,5*7dot
        CALL    DELAY30uS
        MOV     A,#38H          ;FUNCTION SET
        CALL    WRINS_NOCHK     ;8 bit, N=1,5*7dot
        CALL    DELAY30uS
        MOV     A,#14H          ;set bias
        CALL    WRINS_CHK
        CALL    DELAY30uS
        MOV     A,#78H          ;Contrast set adjustment
        CALL    WRINS_CHK
        CALL    DELAY30uS
        MOV     A,#5EH          ;Power/ICON/Contrast control
        CALL    WRINS_CHK
        CALL    DELAY30uS
        MOV     A,#6AH          ;Follower control
        CALL    WRINS_CHK
        CALL    DELAY30uS
        MOV     A,#0CH          ;DISPLAY ON
        CALL    WRINS_CHK
        CALL    DELAY30uS
        MOV     A,#01H          ;CLEAR DISPLAY
        CALL    WRINS_CHK
        CALL    DELAY2mS
        MOV     A,#06H          ;ENTRY MODE SET
        CALL    WRINS_CHK       ;CURSOR MOVES TO RIGHT
        CALL    DELAY30uS
;-------------------------------------------------------------------------------
MAIN_START:
        XXXX
        XXXX
        XXXX
        XXXX
;-------------------------------------------------------------------------------
WRINS_CHK:
        CALL    CHK_BUSY
WRINS_NOCHK:
        CLR     RS                      ;EX: Port 3.0
        CLR     RW                      ;EX: Port 3.1
        SETB    E                       ;EX:Port 3.2
        MOV     P1,A                    ;EX:Port 1=Data Bus
        CLR     E
        MOV     P1,#FFH                 ;For Check Busy Flag
        RET
;-------------------------------------------------------------------------------
CHK_BUSY:                               ;Check Busy Flag
        CLR     RS
        SETB    RW
        SETB    E
        JB      P1.7,$
        CLR     E
        RET
```

■ AC Characteristics

● **68 Interface**



(Ta =25°C)

Item	Signal	Symbol	Condition	VDD=2.7 to 4.5V Rating		VDD=4.5 to 5.5V Rating		Units
				Min.	Max.	Min.	Max.	
Address hold time	RS	t_{AH6}	—	20	-	20	-	ns
Address setup time	RS	t_{AW6}		20	-	20	-	
System cycle time	RS	t_{CYC6}	—	400	-	280	-	ns
Data setup time	D0 to D7	t_{DS6}	—	100	-	80	-	ns
Data hold time	D0 to D7	t_{DH6}		40	-	20	-	
Access time	D0 to D7	t_{ACC6}	C_L = 100 pF	-	500	-	400	ns
Output disable time	D0 to D7	t_{OH6}		300	-	150	-	
Enable H pulse time	E	t_{EWH}	—	200	-	120	-	ns
Enable L pulse time	E	t_{EWL}	—	150	-	130	-	ns

Note: All timing is specified using 20% and 80% of V_{DD} as the reference.