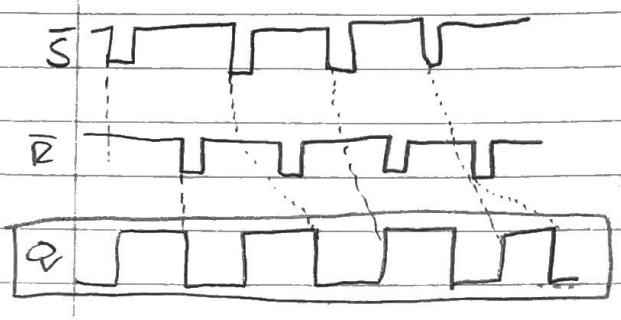
CARLOS MARTIN

CH 7 # 1, 2, 4, 7, 8, 12, 14, 21, 25

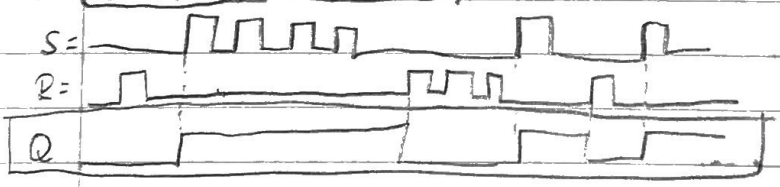
1.)

$\bar{S}$	$\bar{R}$	Q	$\bar{Q}$	COMMENT
1	1	0	0	NO LATCH CHANGE
1	0	0	1	RESET
0	1	1	0	SET
0	0	1	1	N/A



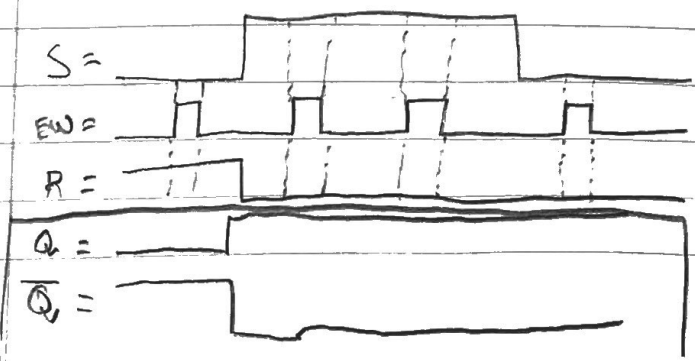
2.) FOR S, R WE HAVE

S	R	Q	$\bar{Q}$
0	0	N/A	
0	1	0	1
1	0	1	0
1	1	1	1

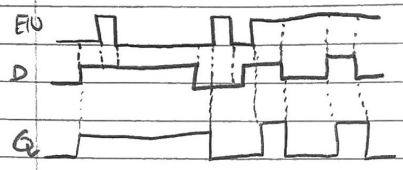


4.)

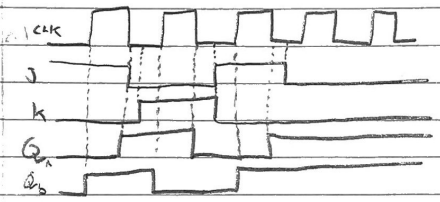
S	R	Q	$\bar{Q}$
0	0	N/A	
0	1	0	1
1	0	1	0
1	1	1	1



7.) EN HIGH, D HIGH, Q IS HIGH
EN HIGH, D LOW, Q LOW
EN LOW, REMAINS SAME.

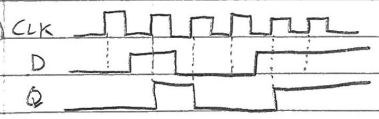


8.)

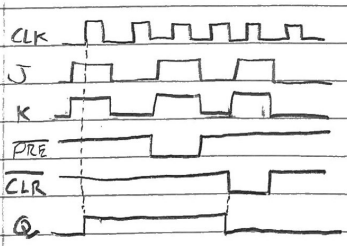


SO IT IS OFF BY A CLOCK PULSE WIDTH.

12.)



14)

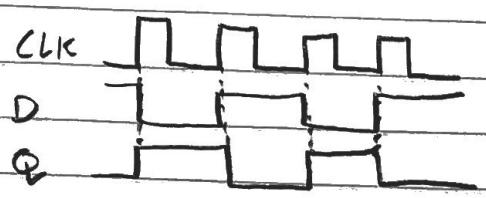


21.) t_W = 30ns + 37ns = 67ns (FULL CLOCK CYCLE)

SO $FREQ = \frac{1}{t_W} = \frac{1}{67ns} = \frac{1}{6.7\times10^{-9}} = 0.01492\times10^{9}$ Hz

SO **FREQ = 14.92 MHz**

26.)



WE CAN SEE THAT THIS DIVIDES THE FREQUENCY BY TWO SINCE THE FREQ IS HALF THE PULSE WIDTH.