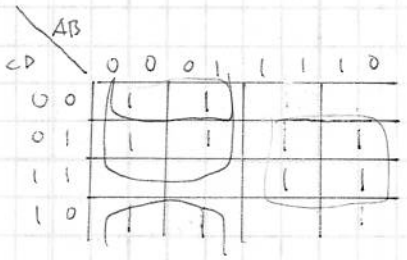
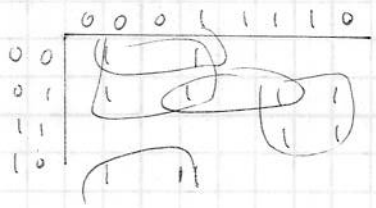
18.1



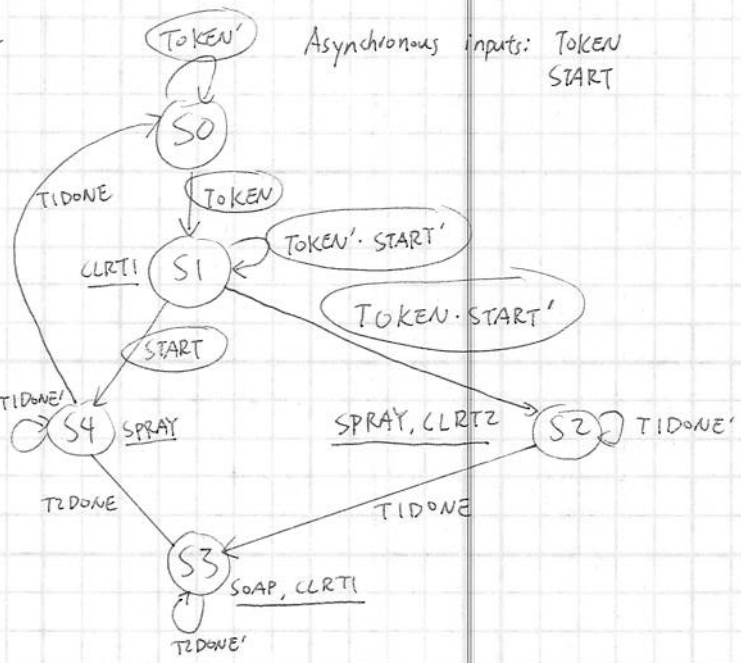
$A'C' + A'D' + AD$

Hazard Free

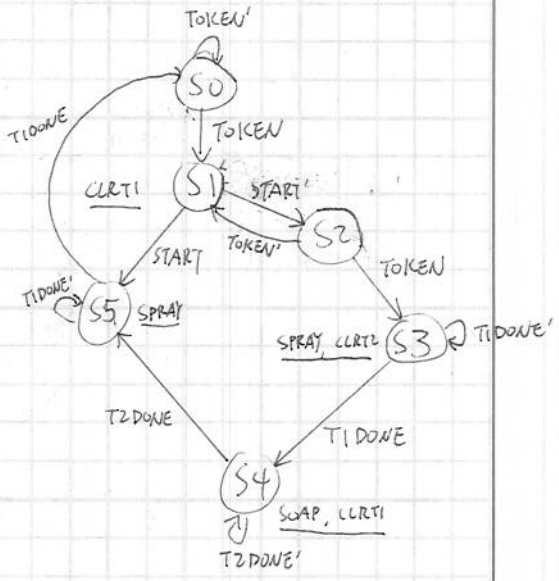


$A'C + A'D' + AD + BC'D$

18.2



Asynchronous inputs: TOKEN
START



18.4

	Z = 0	Z = 1
0 0	S2	S5
0 1	S4	X
1 1	X	S1
1 0	X	S3

State 2 & State 4 would have to be right next to each other.

S1 = 111
S2 = 000
S3 = 110
S4 = 001
S5 = 100

D1)

Timer = 6ms

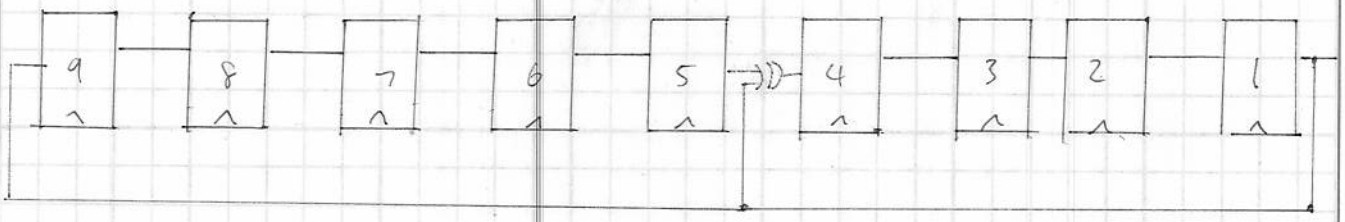
$100\ MHz = \frac{1}{100\,000\,000\ sec} = 0.00001\ ms$

$\frac{6}{0.00001} = 600,000 - 1 = 599\,999$ 20 bits

$\frac{1\ sec}{6\ ms} = 166$ signal changes

L1

$x^9 + x^4 + 1$



$2^9 - 1 = 511$ periods