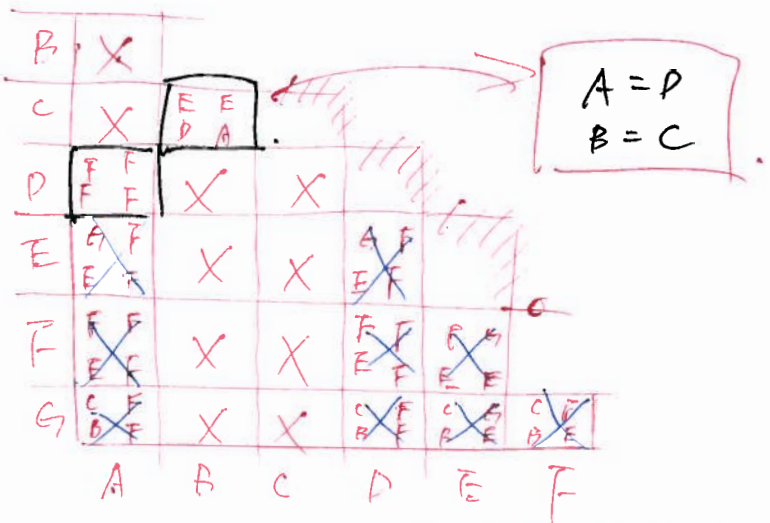
Individual Homework 6 Answer

(1) 6.11 (part a only)

prime implicants: $a'bc$, bcd, abd, $ac'd$, $ab'c'$

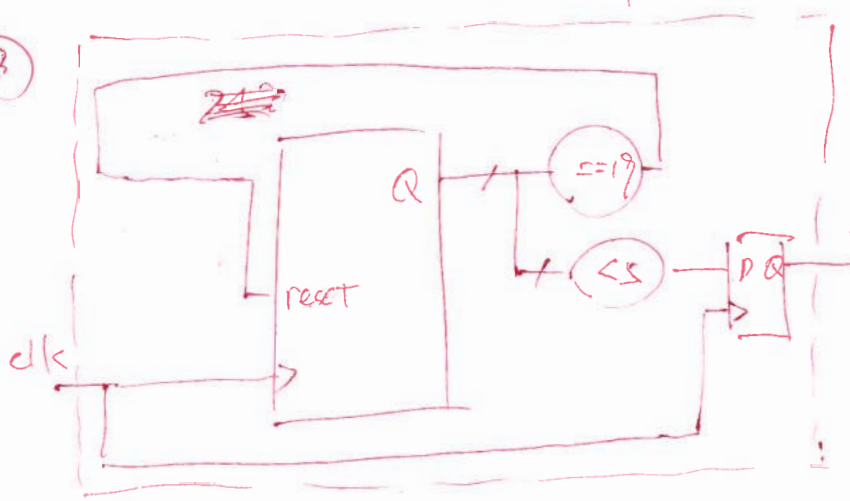
essential prime implicants: $a'bc$, $ab'c'$

(2)



FSM not provided.

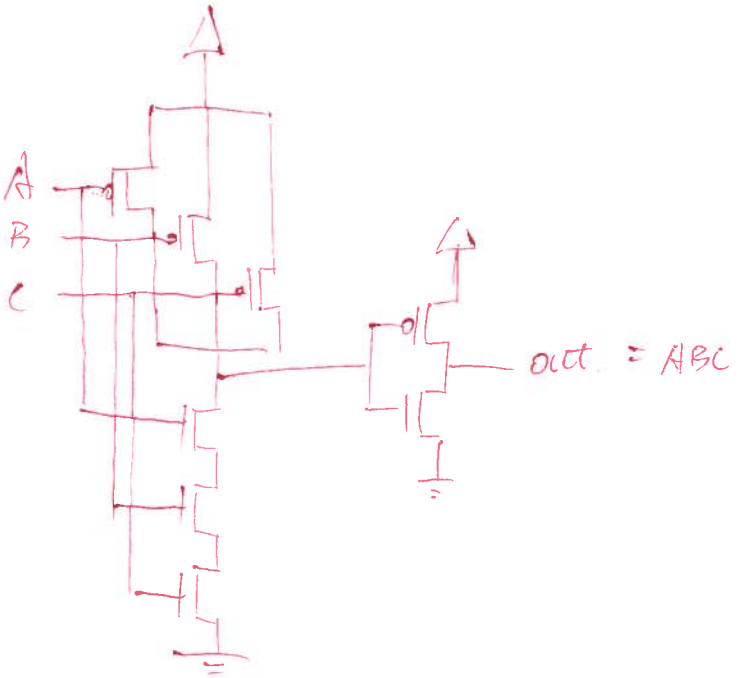
(3)



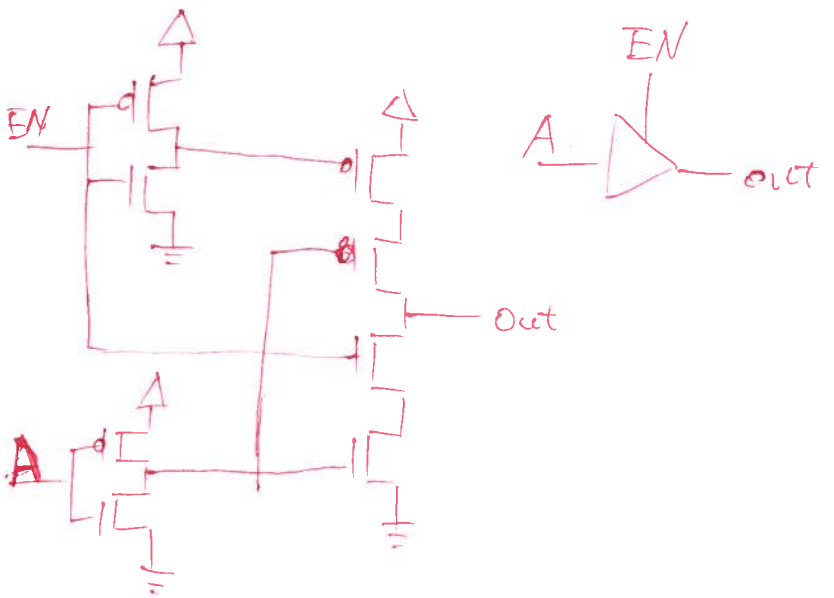
(=19): ~~$Q_4'Q_3'Q_2'Q_1'Q_0'$~~ $Q_4Q_1Q_0$ (should be $Q_4Q_3'Q_2'Q_1Q_0$, but since the number won't exceed 19 $Q_4Q_1Q_0$ will also work)

(<15): $Q_4'Q_3'(Q_2' + Q_2Q_1'Q_0')$

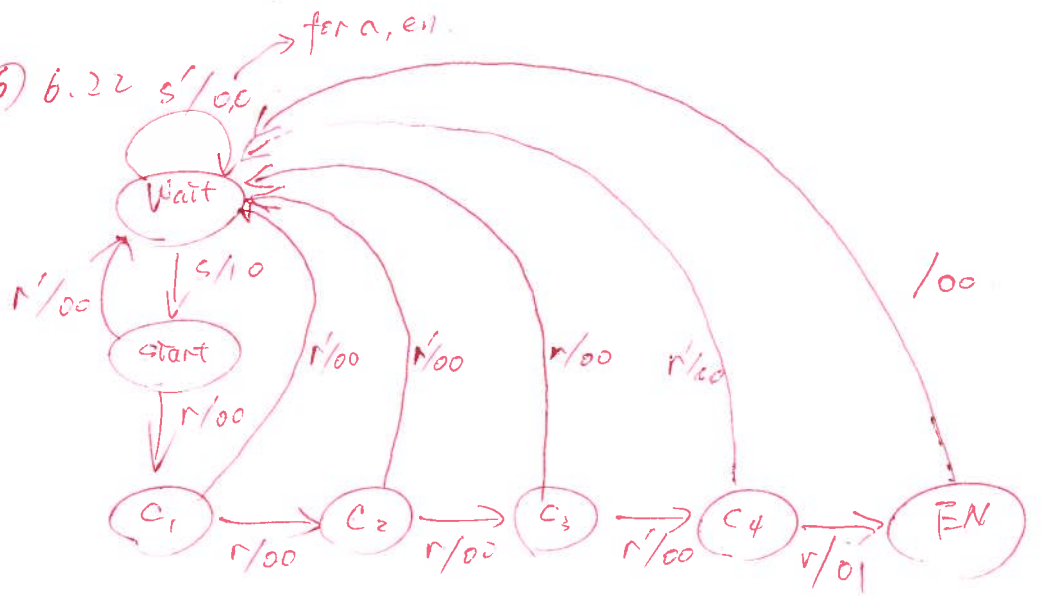
(4)


A
B
C
out = ABC

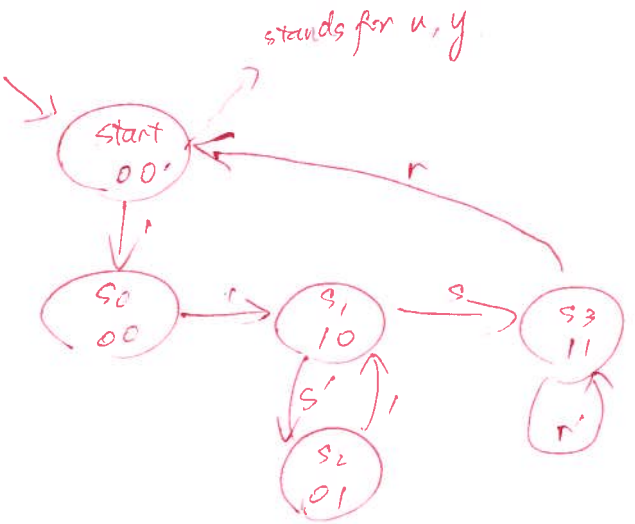
(x)


EN
A
Out
EN
A
out

(6) 6.22

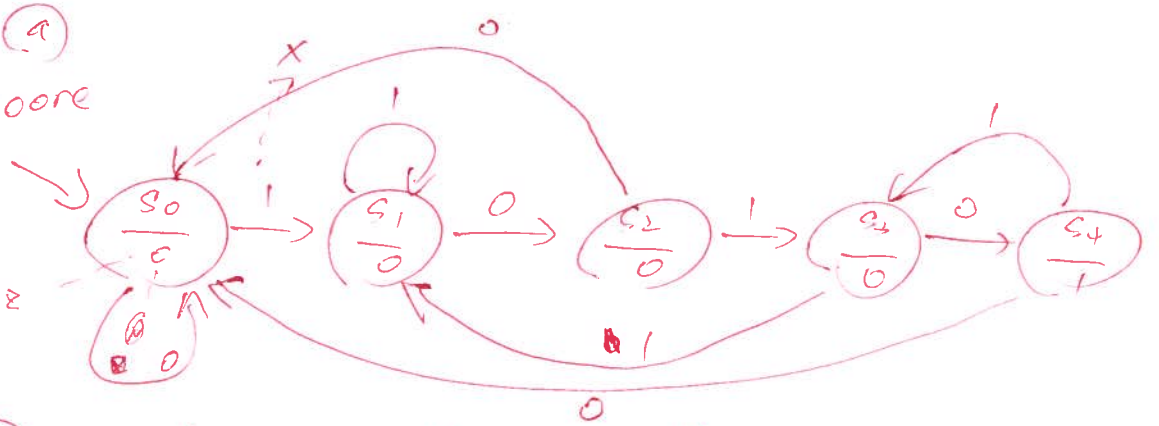

for a, e, i
s'/00
wait
s/10
r'/00
start
r/00
r'/00
r'/00
r/00
r'/00
/00
C1
C2
C3
C4
EN
r/00
r/00
r'/00
r/01

(7)



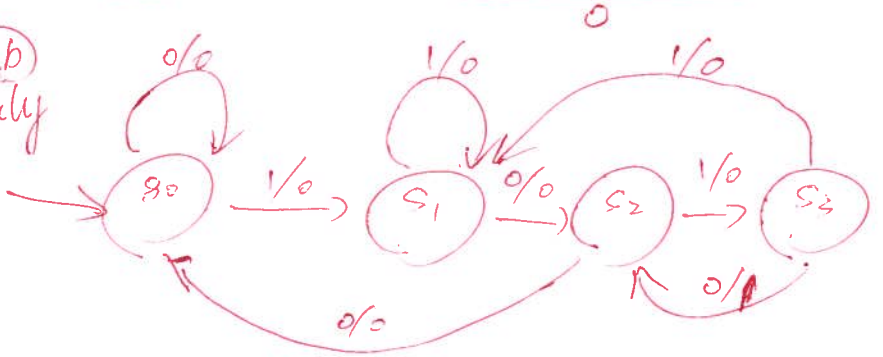
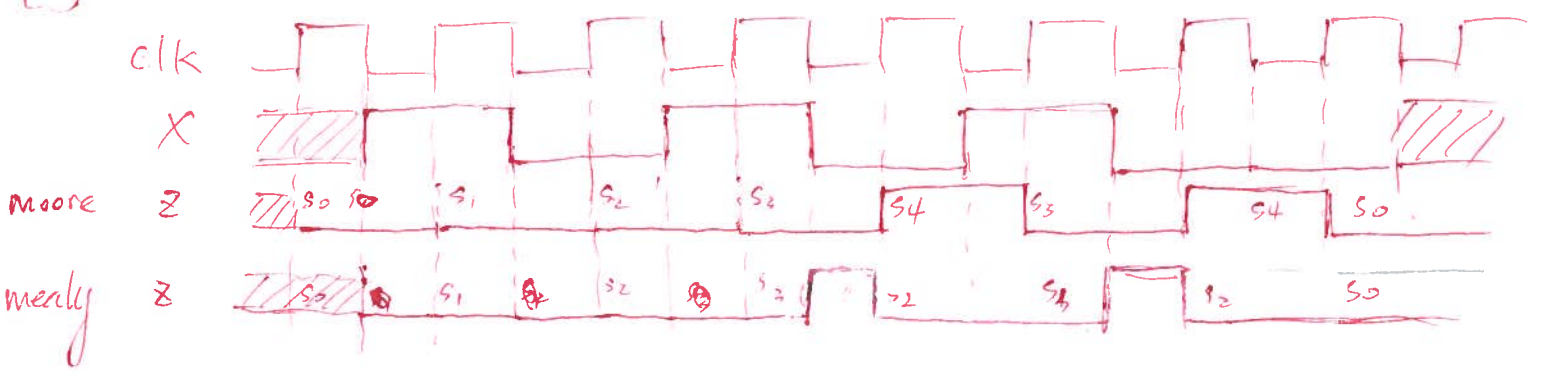
(8) (a)

moore



(b)

mealy



(c)