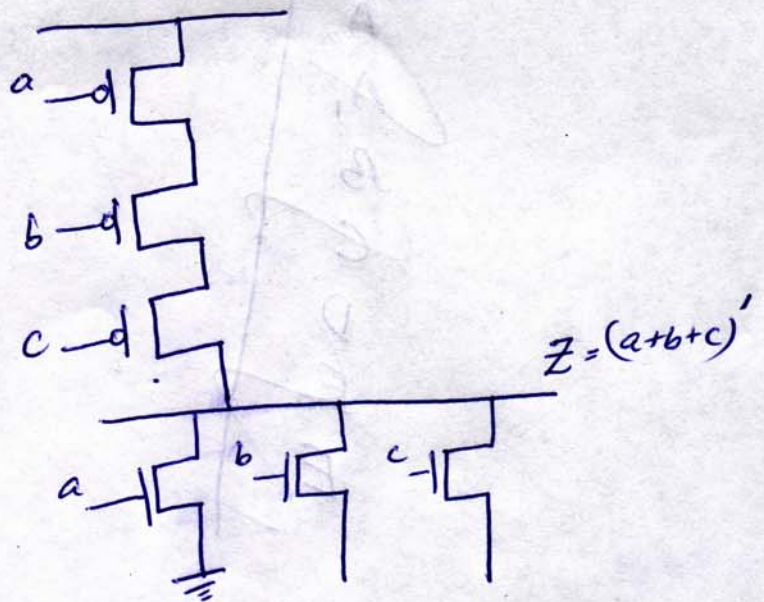
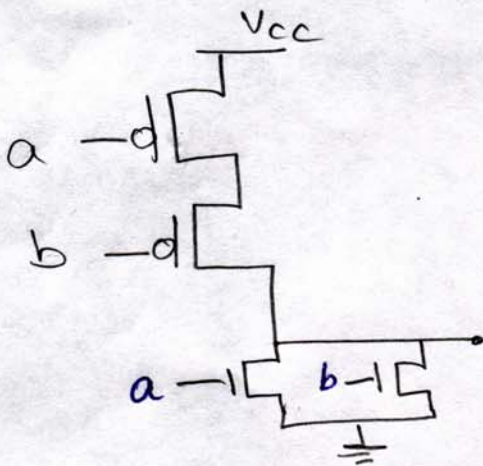
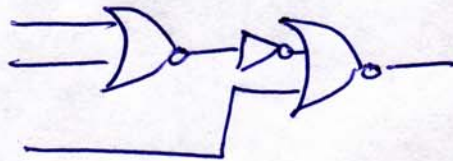


40L FINAL SOLUTION

①

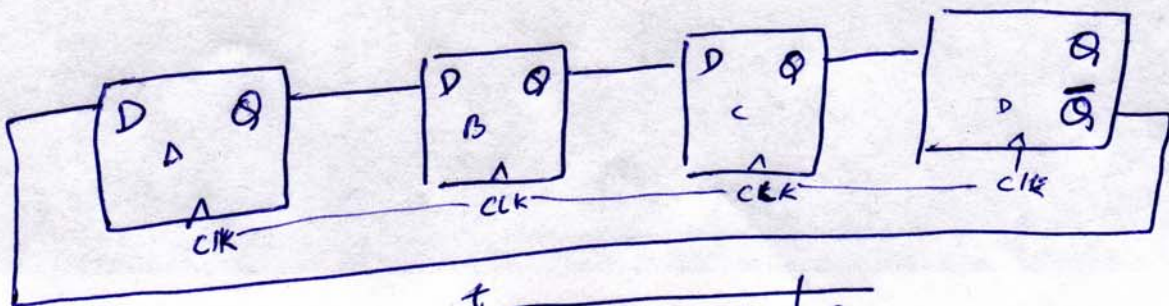


Other solutions accepted for $(A+B+C)'$ are



④

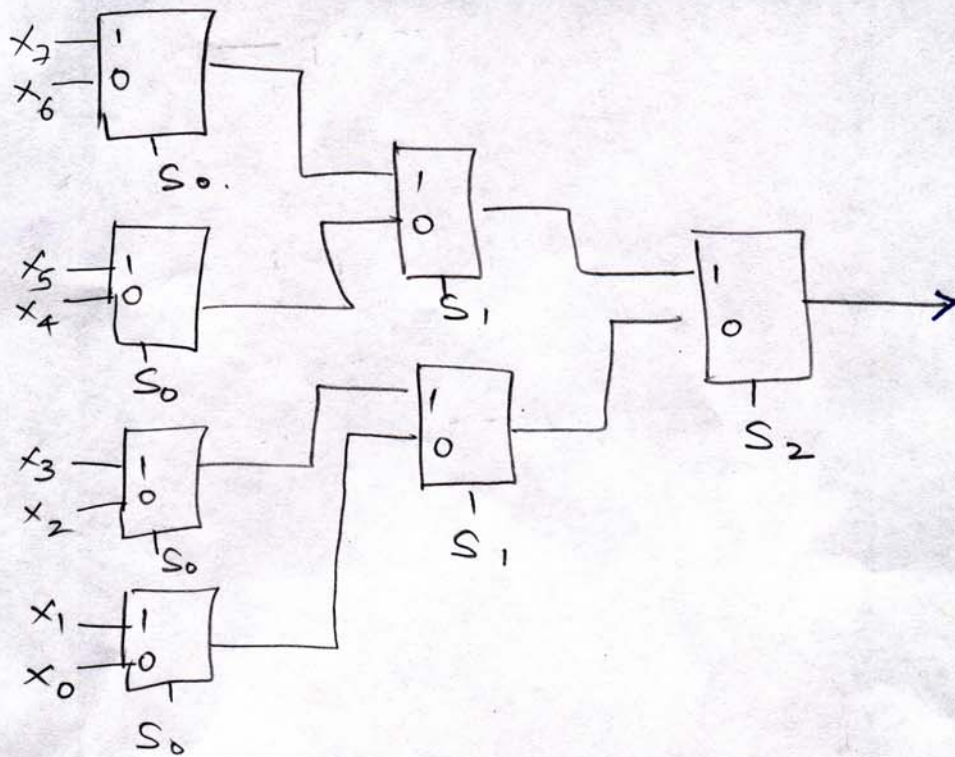
4 bit Johnson Adder.



Counting Sequence:

t					
0	0	0	0	0	0
1	1	0	0	0	8
2	1	1	0	0	12
3	1	1	1	0	14
⋮	1	1	1	1	
	0	1	1	1	
	0	0	1	1	
	0	0	0	1	
	0	0	0	0	

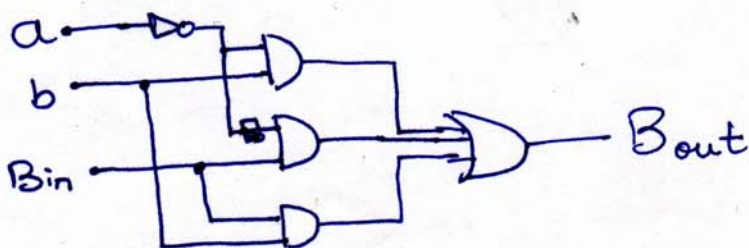
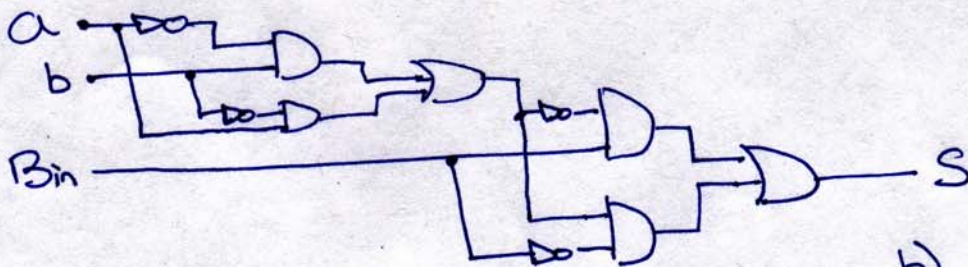
2



3

a) $S = a \oplus b \oplus B_{in}$

$$B_{out} = a' \cdot b + a' \cdot B_{in} + b \cdot B_{in}$$



b) 1. depends on how you draw the circuit

2.

a	0	0	0	0
b	1	1	1	1
bin	1	1	1	1
	1	1	1	1