

Combinational Circuits

(a) Truth Table

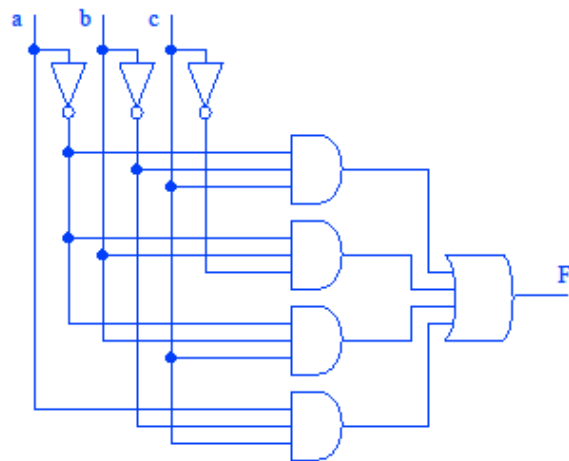
a	b	c	output
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	1
1	0	0	0
1	0	1	1
1	1	0	0
1	1	1	0

(b) $F = a'b'c + a'bc' + a'bc + ab'c$

(c) The diagram in (c) is the circuit for the sum-of-products expression in (b).

(d) The diagram in (d) is the circuit for $F = a'b + b'c$.

(c)



(d) For a tiny amount of extra credit, simplify the formula and the circuit.

$$F = ab + b\bar{c}$$

