

Lab Task #3.

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Lab Task #1 Q# 1.(A).

A	B	$C = A \oplus B$	$D = A \cdot B$
0	0	0	0
0	1	1	0
1	0	1	0
1	1	0	1

(B)

C is performing XOR function
 D is performing AND function

C.

$$C = AB' + A'B$$

$$D = A \cdot B$$

Lab Task #2
Tab

Q#2.

A	B	A'	C	D
0	0	1	0	0
0	1	1	1	1
1	0	0	1	0
1	1	0	0	0

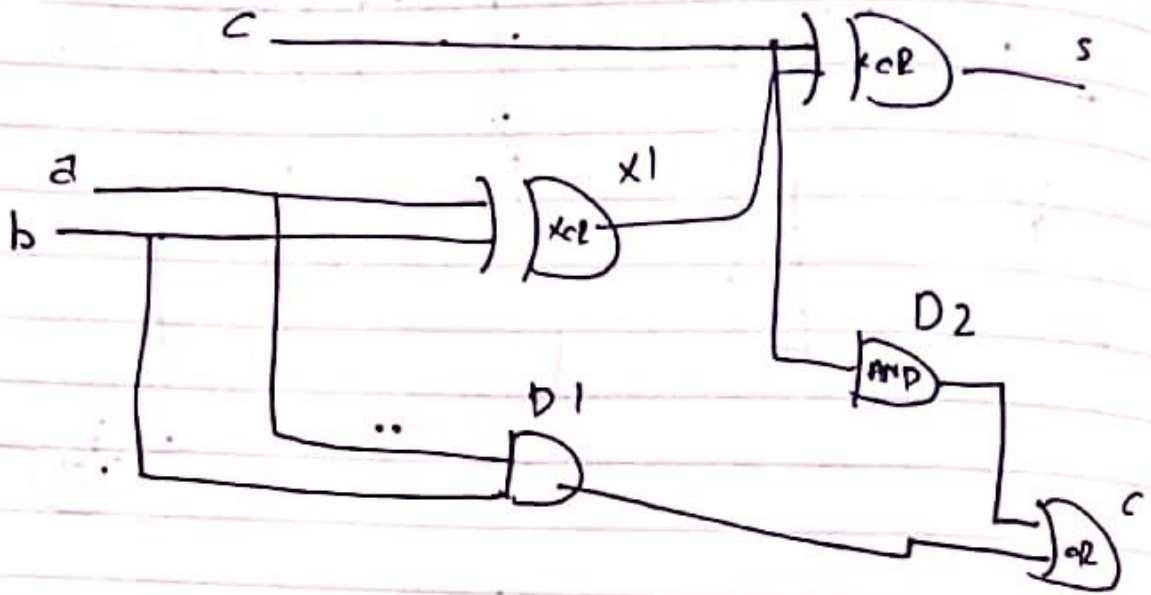
$$C = A \oplus B = A'B + AB'$$

$$D = A'B$$

(B)

C is XOR gate & D is AND gate with 1 with input inverted.

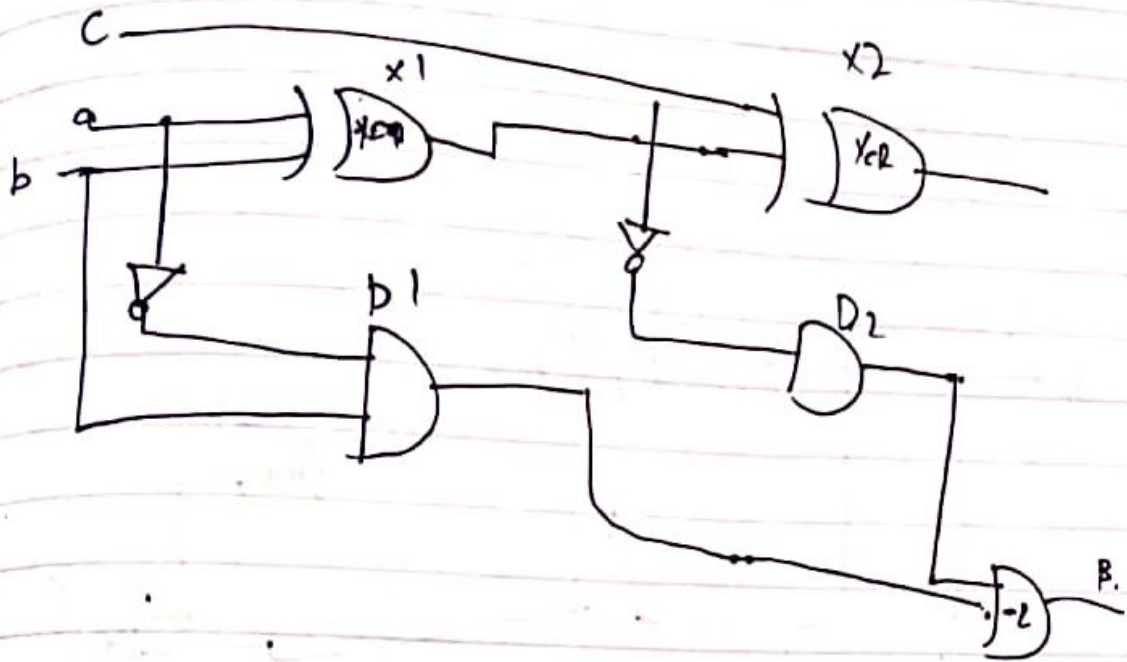
Lab Task 3.



	a	b	c	D1	x1	D2	s	c
1	0	0	0	0	0	0	0	0
	0	0	1	0	0	0	1	0
	0	1	0	0	1	0	1	0
	0	1	1	0	1	1	0	1
	1	0	0	0	1	0	1	0
	1	0	1	0	1	1	0	1
	1	1	0	1	0	0	0	1
	1	1	1	1	0	0	1	1

S = xor function made from inputs are at which is xor itself.

C₂ or function made from AND gate.



(A)

a	b	c	$D1 = a \cdot b$	X1	$D2 = (X1 \cdot c)$	$X2 = D1 \oplus D2$	B = OR
0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0
0	1	0	0	1	0	1	1
0	1	1	0	1	0	1	1
1	0	0	0	1	0	1	1
1	0	1	0	1	0	1	1
1	1	0	1	0	0	1	1
1	1	1	1	0	1	1	1

(B)

D is a XOR gate made from two inputs one of which is itself XOR where B is OR gate made from AND gates & XOR gate.