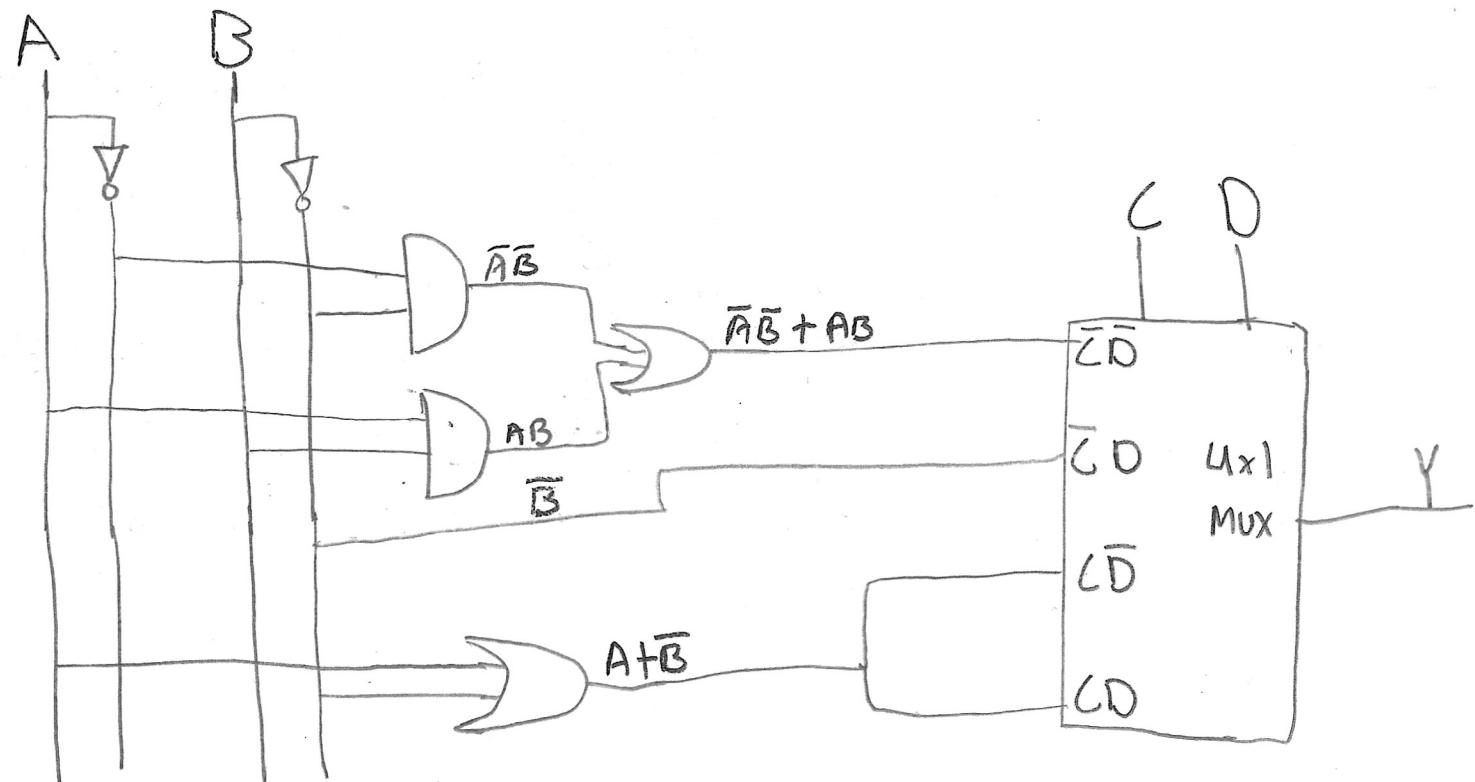


a)

	AB	CD
00	1 0 1 0	$\bar{A}\bar{B} + A\bar{B}$
01	1 0 0 1	\bar{B}
11	1 0 1 1	$A + \bar{B}$
10	1 0 1 0	$A + \bar{B}$

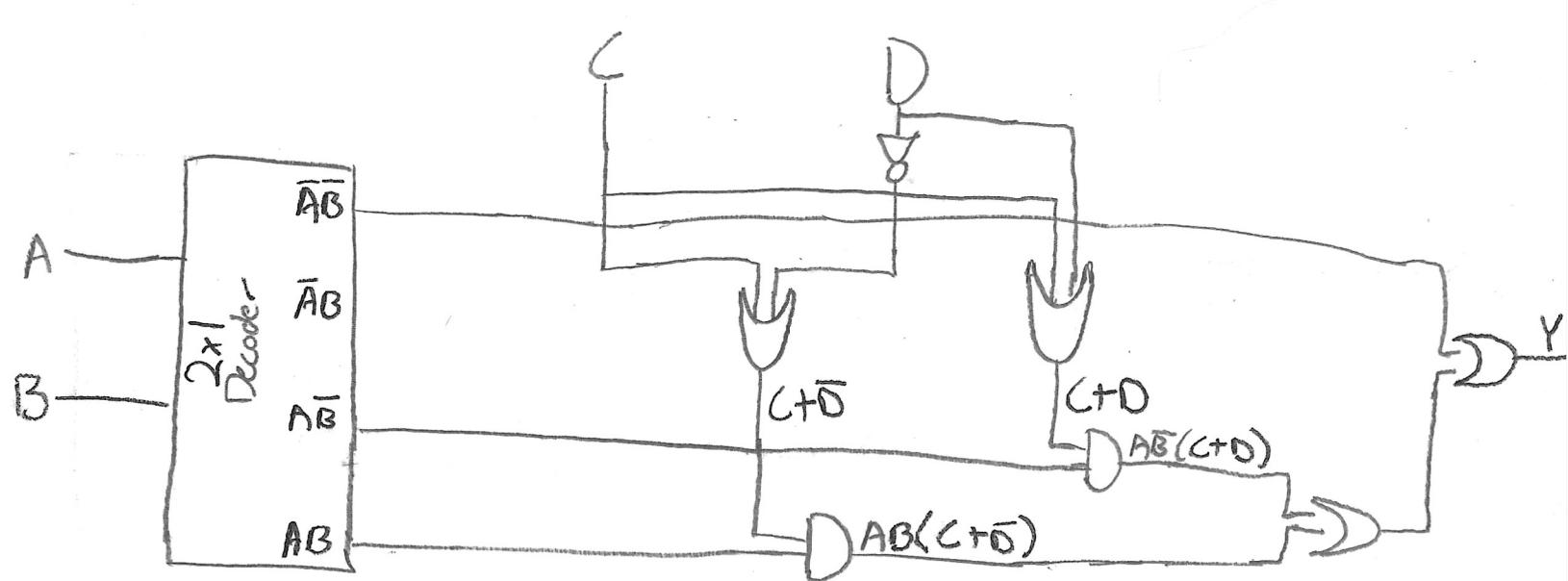
$$Y = \bar{C}\bar{D}(\bar{A}\bar{B} + A\bar{B}) + \bar{C}D(\bar{B}) + CD(A + \bar{B}) + C\bar{D}(A + \bar{B})$$



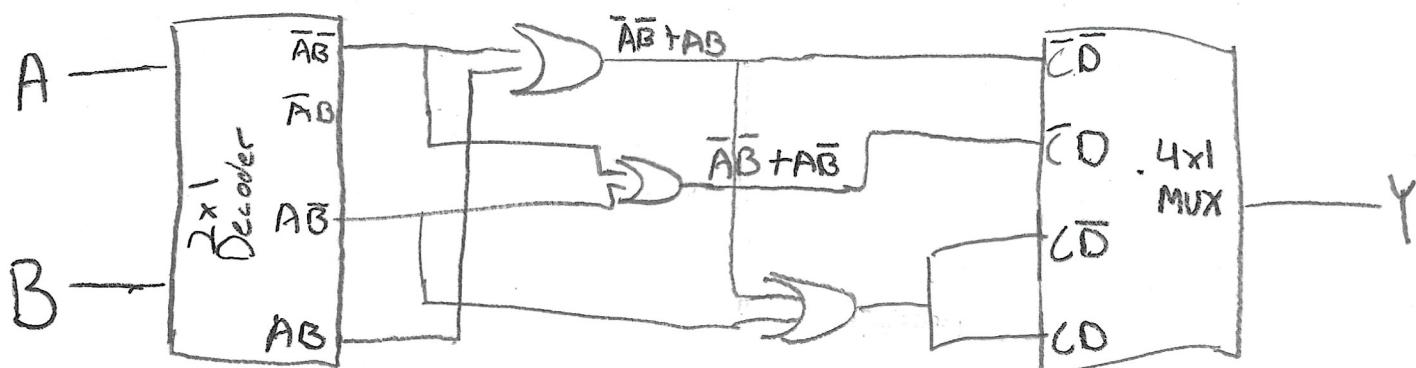
b)

	AB	CD	00	01	11	10
00	1	0	1	0	1	0
01	1	0	0	0	1	1
11	1	0	1	1	0	0
10	1	0	0	1	1	1

$$Y = \bar{A}\bar{B} + AB(C+\bar{D}) + A\bar{B}(C+D)$$



$$C) Y = (\bar{A}\bar{B} + AB)\bar{C}\bar{D} + (\bar{A}\bar{B} + A\bar{B})\bar{C}D + (\bar{A}\bar{B} + AB + A\bar{B})C\bar{D} + (\bar{A}\bar{B} + AB + A\bar{B})CD$$



	AB	CD	00	01	11	10
00	1	0	1	0	1	0
01	1	0	0	1	1	1
11	1	0	1	1	0	0
10	1	0	0	1	1	1