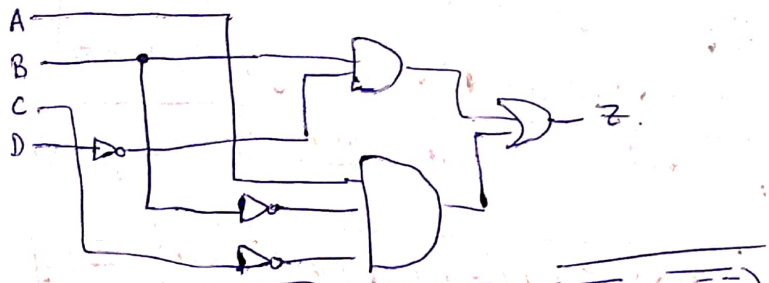
FUNDC. TASK 1 : ED. 1 $\quad \Sigma m(4,6,8,9,12,14)$

AB \ CD	00	01	11	10
00				
01	1			1
11	1			1
10	1	1		

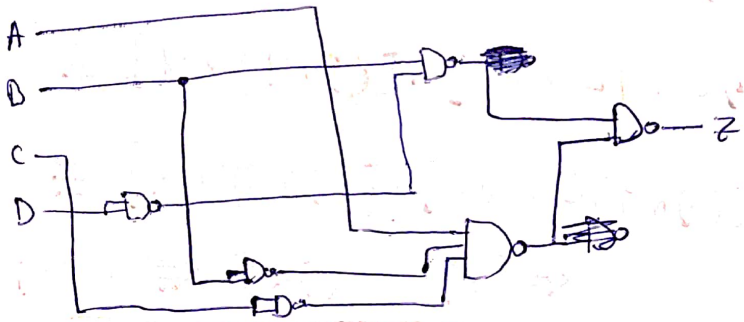
$B\bar{D} + A\bar{B}\bar{C}$

(a)



$B\bar{D} + A\bar{B}\bar{C} = \overline{\overline{B\bar{D}} + \overline{A\bar{B}\bar{C}}} = \overline{\overline{B\bar{D}} \cdot \overline{A\bar{B}\bar{C}}} = \left(\overline{\overline{B\bar{D}} \cdot \overline{A\bar{B}\bar{C}}}\right)$

(b)



Task 1. Exercise 2.

$$Z = \overline{A+B} + B\bar{C}D + A\bar{B}\bar{C}\bar{D} = \bar{A}\bar{B} + B\bar{C}D + A\bar{B}\bar{C}\bar{D}$$

(a)

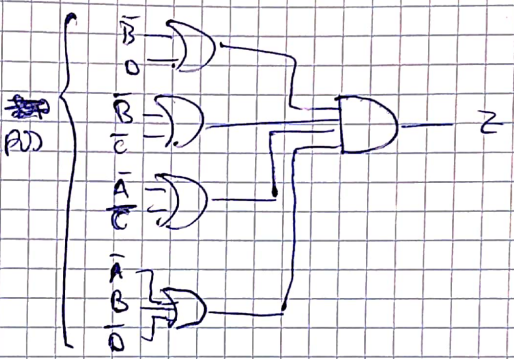
A	B	C	D	Z
0	0	0	0	1
0	0	0	1	1
0	0	1	0	1
0	0	1	1	1
0	1	0	0	0
0	1	0	1	1
0	1	1	0	0
0	1	1	1	0
1	0	0	0	1
1	0	0	1	0
1	0	1	0	0
1	0	1	1	0
1	1	0	0	0
1	1	0	1	1
1	1	1	0	0
1	1	1	1	0

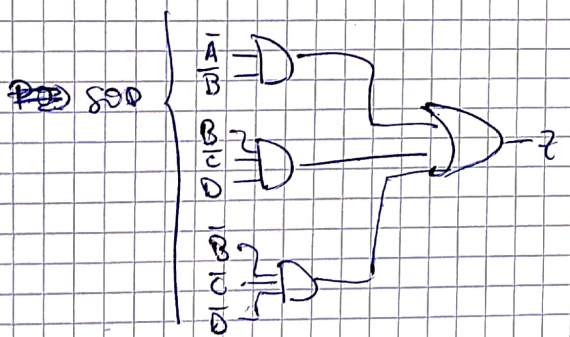
(b)

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

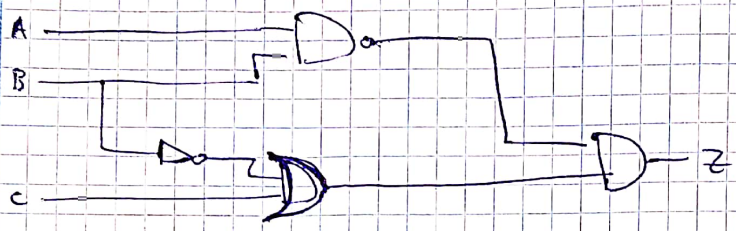
POS: $Z = \bar{A}\bar{B} + B\bar{C}D + \bar{B}\bar{C}\bar{D}$

SOP: $Z = (\bar{B}+D)(\bar{B}+\bar{C})(\bar{A}+\bar{C})(\bar{A}+B+\bar{D})$





TASK 1. Exercise 3.



$$Z = \overline{A}B \cdot (\overline{B} + C)$$

$$Z = (\overline{A} + B) \cdot (\overline{B} + C)$$

~~$\overline{AB}\,(\overline{B} + C) = \overline{AB} + \overline{(\overline{B} + C)}$~~

~~$\overline{(\overline{A} + B)} + \overline{(\overline{B} + C)}$~~

$$Z = \overline{(\overline{A} + \overline{B})} + \overline{(\overline{B} + C)}$$