1:)

a)

A	B	C	S
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	1
1	0	1	0
1	1	0	0
1	1	1	0

→ $\bar{A}\,\bar{B}\,\bar{C}$

ou

→ $A\,\bar{B}\,\bar{C}$

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

b)

$S = \bar{A}\,\bar{B}\,\bar{C} + A\,\bar{B}\,\bar{C}$

propriedade distributiva

$S = \bar{B}\bar{C}(\bar{A} + A)$

↳ identidade $A + \bar{A} = 1$

$S = \bar{B}\bar{C} \cdot 1$

$S = \bar{B}\bar{C}$

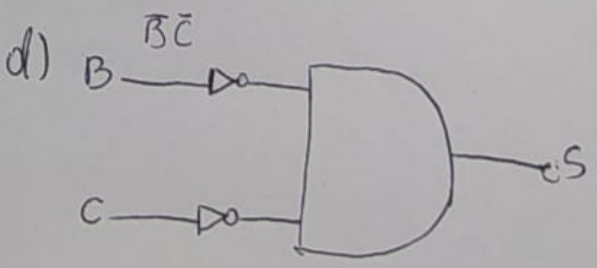
c)

	$\bar{B}$ 00	01	$\bar{B}$ 11	10
$\bar{A}$ 0	1	0	0	0
A 1	1	0	0	0
	$\bar{C}$	C		$\bar{C}$

↳ $S = \cancel{A = 0/1}$ $B = 0$ $C = 0$

$S = \bar{B}\bar{C}$

d)



2º) a) $\bar{A}\bar{B}C\bar{D} + \bar{A}\bar{B}CD + A\bar{B}C\bar{D} + A\bar{B}CD$

b) $\bar{A}\bar{B}C\bar{D} + \bar{A}\bar{B}CD + A\bar{B}C\bar{D} + A\bar{B}CD$

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

$S = \bar{B}(\bar{A}C(\bar{D}+D) + A\bar{D}(\bar{C}+C))$ // postulado da soma

$S = \bar{B}(\bar{A}C + A\bar{D})$ // distributiva

$\boxed{S = \bar{A}\bar{B}C + AB\bar{D}}$

c)

AB \ CD	$\bar{C}$ 00	$\bar{C}$ 01	C 11	C 10	
$\bar{A}$ 00	0	0	1	1	$\bar{B}$ — I
$\bar{A}$ 01	0	0	0	0	B
A 11	0	0	0	0	B
A 10	1	0	0	1	$\bar{B}$ — II
	$\bar{D}$	D		$\bar{D}$	

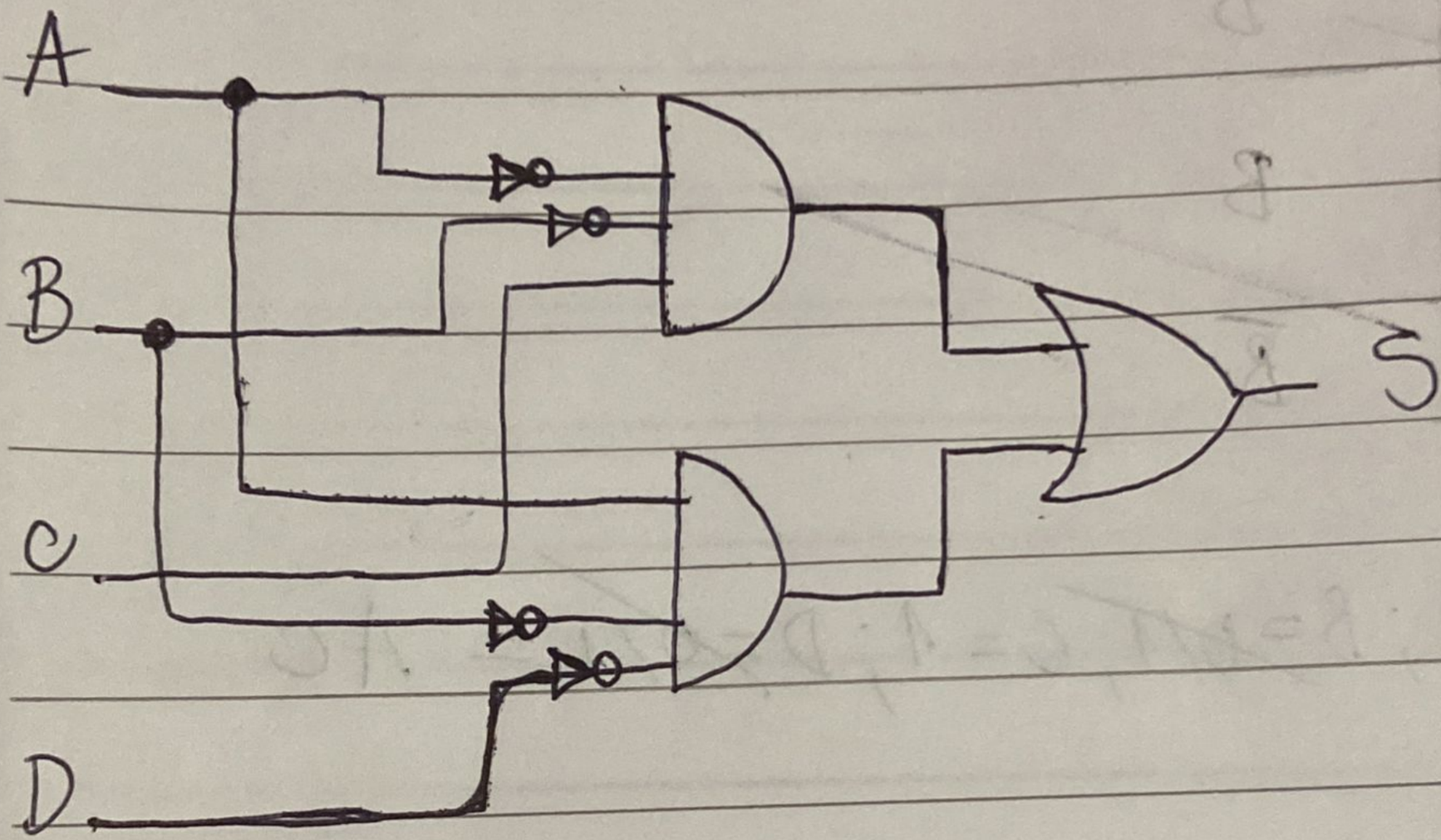
I = A=0; B=0; C=1; D=0/1 = $\bar{A}\bar{B}C$

II = A=1; B=0; C=0/1; D=0 = $A\bar{B}\bar{D}$

$\boxed{S = \bar{A}\bar{B}C + A\bar{B}\bar{D}}$

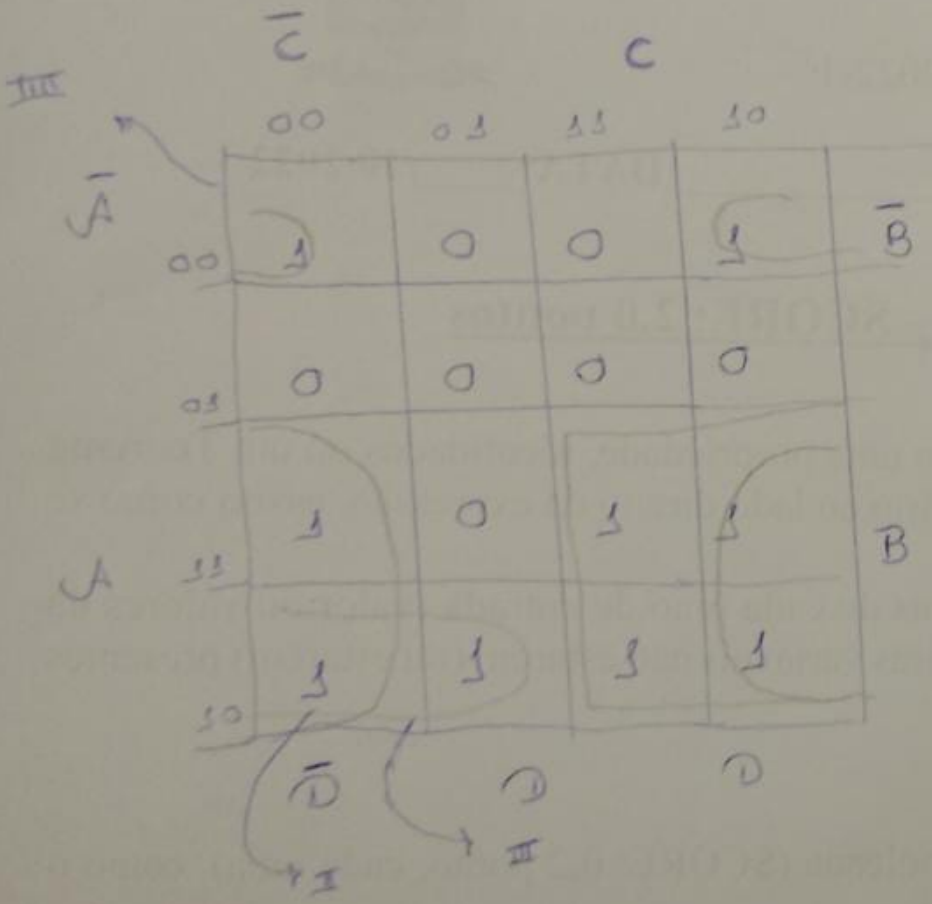
2º)

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



(3)

(A)



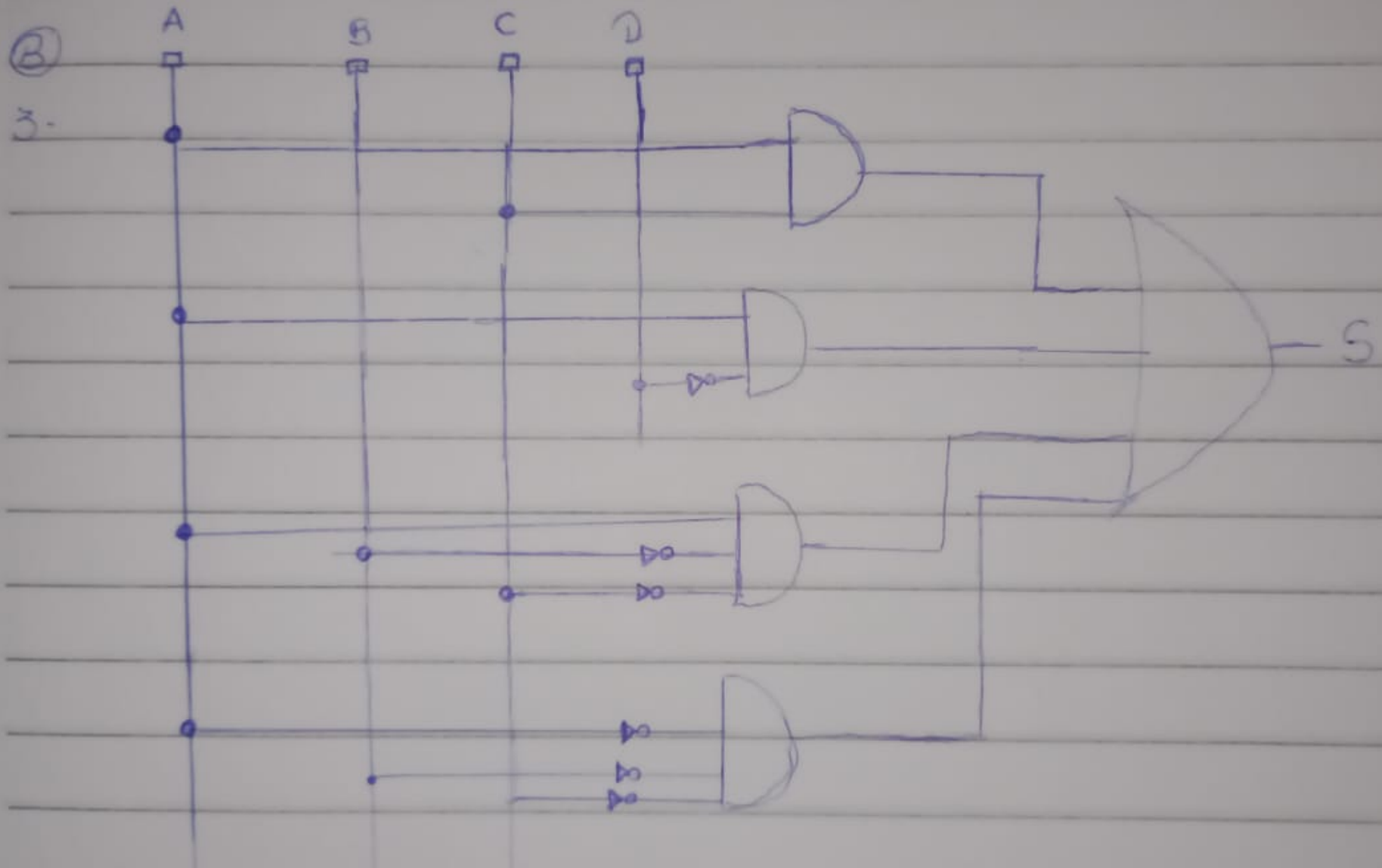
I = $A = 1\ B = \not{1}0\ C = 1\ D = \not{1}0 = AC$

II = $A = 1\ B = \not{1}0\ C = \not{1}0\ D = 0 = A\bar{D}$

III = $A = 1\ B = 0\ C = 0\ D = \not{1}0 = A\bar{B}\bar{C}$

IIII = $A = 0\ B = 0\ C = \not{1}0\ D = 0 = \bar{A}\bar{B}\bar{D}$

$S = AC + A\bar{D} + A\bar{B}\bar{C} + \bar{A}\bar{B}\bar{D}$

(B)

3.