(2) ESCREVA NA FORMA MÍNIMA DE SOMA-DE-PRODUTOS

$\bar{A}'BCDE + ABC(\overline{DE})' + ABCD\bar{E} + (\overline{ABCDE})' + (\overline{ABC})'DE + (A+B)\bar{E}$

$\bar{A}BCDE + 1 + 1 + (A+B).\bar{E}$

$+ \quad 1$

$1 + (A+B).\bar{E}$

$S = 1$

(1) $(ABCDE) + (\overline{ABCDE}) \rightarrow A + \bar{A} = 1$

(2) $ABC(\overline{DE}) + (\overline{ABC})DE \rightarrow A + \bar{A} = 1$

(3) $1 + 1 = 1$

(4) $\bar{A}BCDE + 1 = 1$

(5) $1 + (A+B).\bar{E} = 1$

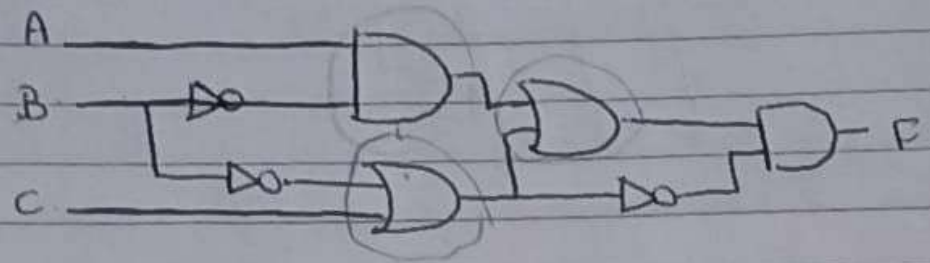
$S = 1$

(3) PARA CADA UM DOS CIRCUITOS ABAIXO:

A) DETERMINE A EXPRESSÃO LÓGICA

B) SIMPLIFIQUE E CONSTRUA UM CIRCUITO EQUIVALENTE

(1)



$(A.\overline{B})$ (A) $[(A.\overline{B})+(\overline{B}+C)].\overline{(\overline{B}+C)}$

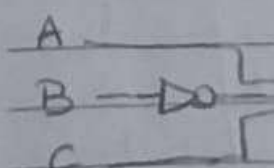
$(\overline{B}+C)$

(B) $[(A.\overline{B})+(\overline{B}+C)].\overline{(\overline{B}+C)}$

$(B+\overline{C})$

A	B	C	$\overline{B}$	$(A.\overline{B})$	$(\overline{B}+C)$	$(A.\overline{B})+(\overline{B}.C)$
0	0	0	1	0	1	1
0	0	1	1	0	1	1
0	1	0	0	0	0	0
0	1	1	0	0	1	1
1	0	0	1	1	1	1
1	0	1	1	1	1	1
1	1	0	0	0	0	0
1	1	1	0	0	1	1

$(\overline{B}+C)(B+\overline{C}) = 0$



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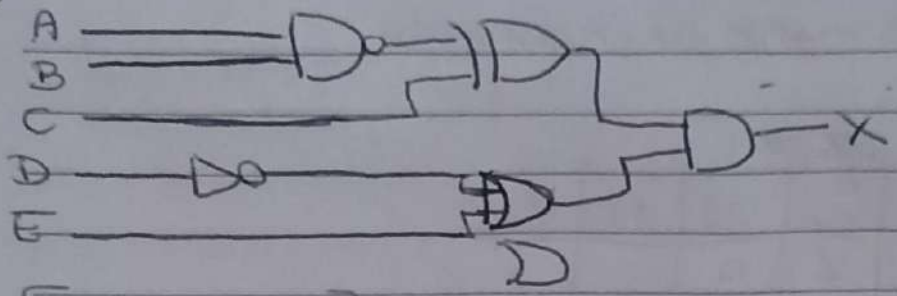
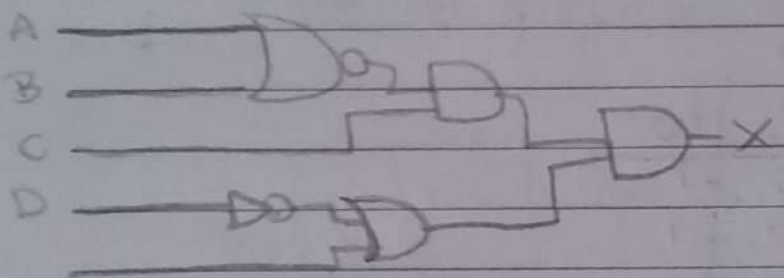
(2)



$$\left[\overline{(A.B)} \oplus C\right].(\bar{D}+E)$$

$$\left[(\overline{A+B}).C\right]+\left[(\overline{A+B}).C\right].(\bar{D}+E)$$

$$C.(\overline{A+B}).\bar{D}+E$$



(4) SIMPLIFIQUE OS MAPAS DE KARNAUGH

A)

X \ YZ	00	01	11	10
0	1	0	0	1
1	1	0	1	1

- X = 0/1 Y = 0/1 Z = 0
- X = 1 Y = 1 Z = 1/0

$X \cdot Y + \overline{Z}$

B)

XY \ ZW	00	01	11	10
00	1	1	0	1
01	1	0	0	1
11	1	0	0	1
10	1	1	0	1

- X = 0/1 Y = 0/1 Z = 0 W = 0
- X = 0/1 Y = 0/1 Z = 1 W = 0
- X = 0/1 Y = 0 Z = 0 W = 1

$\overline{Z} \cdot \overline{W} + Z \cdot \overline{W} + \overline{Y}\,\overline{Z}\,W$

$\overline{W} \cdot (\overline{Z} + Z) + \overline{Y}\,\overline{Z}\,W$

$\overline{W} \cdot 1 + \overline{Y}\,\overline{Z}\,W \rightarrow \boxed{\overline{W} + \overline{Y}\,\overline{Z}\,W}$

C)

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

- A=0 B=0 C=0/1 D=0
- A=1 B=0 C=0/1 D=0
- A=1 B=1 C=0 D=0
- A=0 B=1 C=1 D=1

$\overline{A}\,\overline{B}\,\overline{D} + A\,\overline{B}\,\overline{D} + \overline{A}B\overline{C}D + \overline{A}BCD$

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$\overline{B}D(\overline{A}+A)+BD(A\overline{C}+\overline{A}C)$

$\overline{B}D \cdot 1 + BD \cdot 1$

$\overline{B}D + BD \rightarrow D(\overline{B}+B)$

D)

GH \ IJ	00	01	11	10
00	0	1	1	0
01	1	0	0	1
11	1	0	0	1
10	0	1	1	0

* G=00 H=0 I=01 J=1
* G=01 H=1 I=01 J=0

$\overline{H}J + H\overline{J} = 1$

E)

GH \ IJ	00	01	11	10
00	0	1	1	0
01	1	1	1	1
11	1	1	1	1
10	0	1	1	0

* G=01 H=1 I=01 J=1
* G=00 H=0 I=01 J=1
* G=01 H=1 I=01 J=0

$HJ + \overline{H}J + H\overline{J}$

$HJ + J = 1$

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