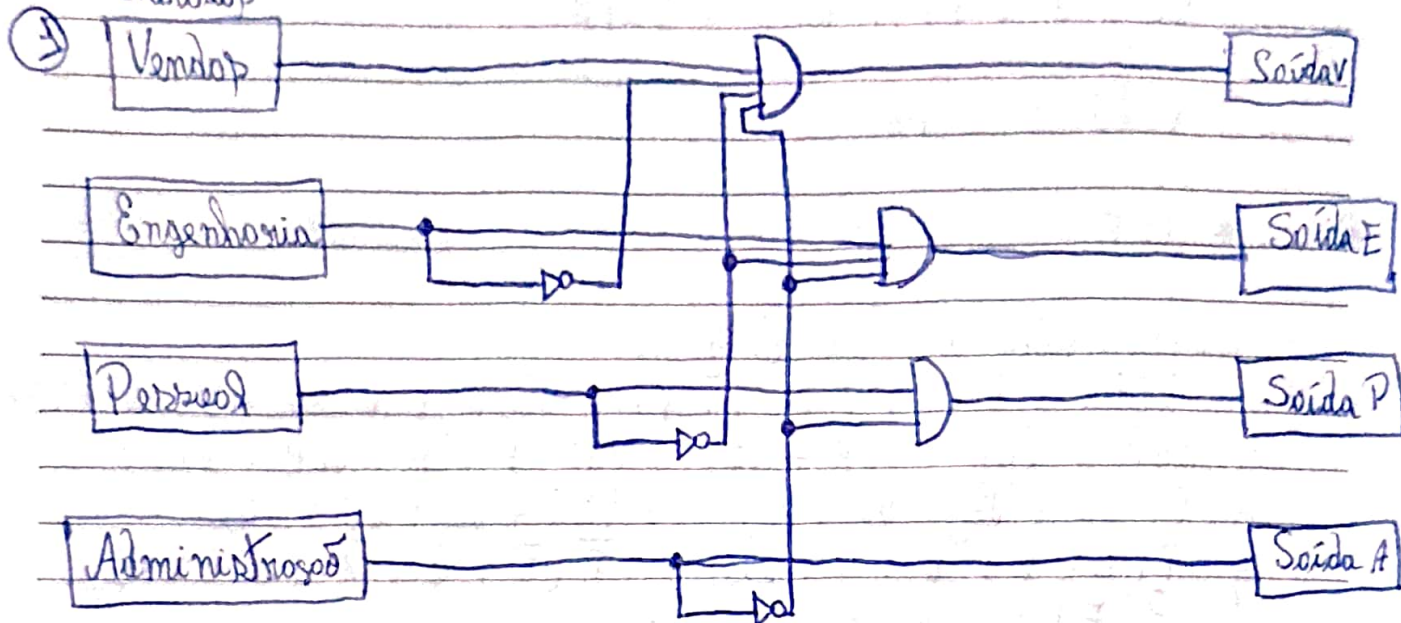


Atividade de Lógica
Aluna: Carla Brito da Silva Teixeira

* 2ª questão:
entradas



②

Vendas	Engenharia	Pessoal	Administrativo	SA	SP	SE	SV
0	0	0	0	0	0	0	0
0	0	0	1	1	0	0	0
0	0	1	0	0	1	0	0
0	0	1	1	1	0	0	0
0	1	0	0	0	0	1	0
0	1	0	1	1	0	0	0
0	1	1	0	0	1	0	0
0	1	1	1	1	0	0	0
1	0	0	0	0	0	0	1
1	0	0	1	1	0	0	0
1	0	1	0	0	1	0	0
1	0	1	1	1	0	0	0
1	1	0	0	0	0	1	0
1	1	0	1	1	0	0	0
1	1	1	0	0	1	0	0
1	1	1	1	1	1	1	1

③ Expressões:

$$1) SA = \bar{V}\bar{E}\bar{P}A + \bar{V}\bar{E}PA + \bar{V}E\bar{P}A + \bar{V}EPA + VE\bar{P}A + VEPA + V\bar{E}\bar{P}A + VEPA$$

$$2) SP = \bar{V}\bar{E}\bar{P}\bar{A} + \bar{V}\bar{E}P\bar{A} + \bar{V}E\bar{P}\bar{A} + VE\bar{P}\bar{A}$$

$$3) SE = \bar{V}\bar{E}\bar{P}\bar{A} + VE\bar{P}\bar{A}$$

$$4) SV = \bar{V}\bar{E}\bar{P}\bar{A}$$

Simplificando as expressões...

$$\begin{aligned} 1) SA &= \bar{V}\bar{E}\bar{P}A + \bar{V}\bar{E}PA + \bar{V}E\bar{P}A + \bar{V}EPA + \bar{V}\bar{E}\bar{P}A + \bar{V}\bar{E}PA + VE\bar{P}A + VEPA; \\ &A(\bar{V}\bar{E}\bar{P} + \bar{V}\bar{E}P + \bar{V}E\bar{P} + \bar{V}EP + V\bar{E}\bar{P} + V\bar{E}P + VE\bar{P} + VEP); \\ &A(P(\bar{V}\bar{E} + \bar{V}\bar{E} + \bar{V}E + VE) + \bar{P}(\bar{V}\bar{E} + \bar{V}\bar{E} + V\bar{E} + VE)); \\ &A(P(E(\bar{V} + \bar{V} + V + V))) + (\bar{P}(\bar{E}(\bar{V} + \bar{V} + V + V))); \\ &A(P(E(1))) + (\bar{P}(\bar{E}(1))); \\ &= A(P(E)) + \bar{P}(\bar{E}); \end{aligned}$$

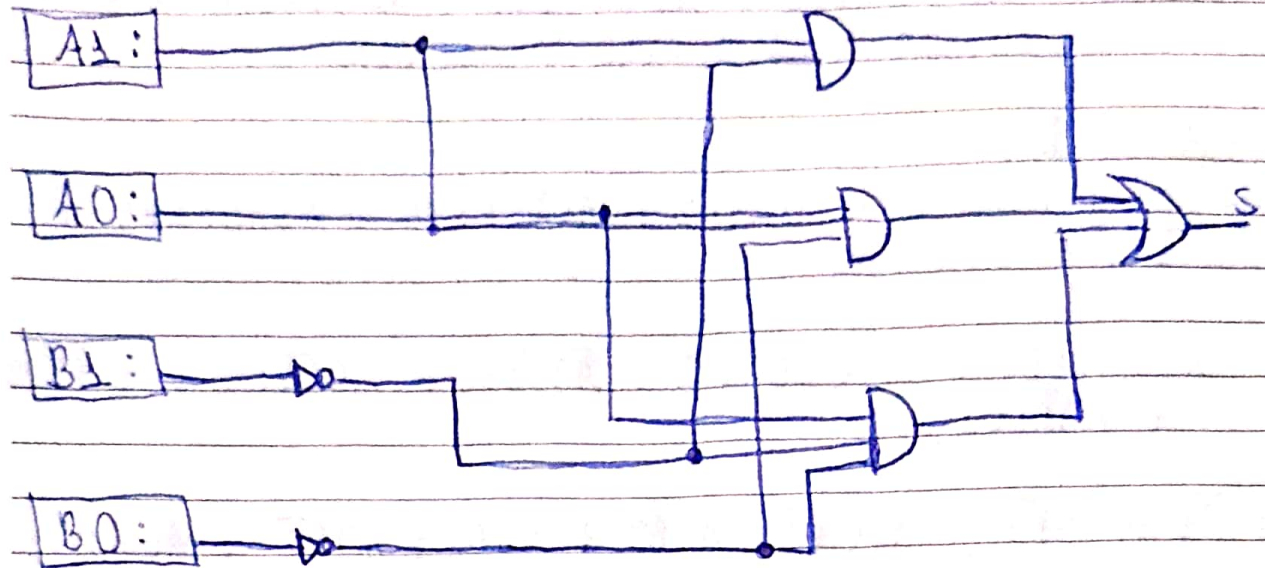
$$\begin{aligned} 2) SP &= \bar{V}\bar{E}\bar{P}\bar{A} + \bar{V}\bar{E}P\bar{A} + \bar{V}E\bar{P}\bar{A} + VE\bar{P}\bar{A}; \\ &\bar{A}(\bar{V}\bar{E}\bar{P} + \bar{V}\bar{E}P + \bar{V}E\bar{P} + VE\bar{P}); \\ &\bar{A}(P(\bar{V}\bar{E} + \bar{V}\bar{E} + \bar{V}E + VE)); \\ &= \bar{A}P. \end{aligned}$$

$$\begin{aligned} 3) SE &= \bar{V}\bar{E}\bar{P}\bar{A} + VE\bar{P}\bar{A} \\ &= \bar{A}PE \end{aligned}$$

$$4) SV = \bar{V}\bar{E}\bar{P}\bar{A}$$

* 3º questão:

①



②

A1	A0	B1	B0	Saida (S)
0	0	0	0	0
0	0	0	1	0
0	0	1	0	0
0	0	1	1	0
0	1	0	0	1
0	1	0	1	0
0	1	1	0	0
0	1	1	1	0
1	0	0	0	1
1	0	0	1	1
1	0	1	0	0
1	0	1	1	0
1	1	0	0	1
1	1	0	1	1
1	1	1	0	1
1	1	1	1	0

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tilibra

③ expressão:

$$S_{\text{aida}} = \overline{A} \overline{A} A O \overline{B} \overline{B} \overline{B} O + A \overline{A} \overline{A} O \overline{B} \overline{B} \overline{B} O + A \overline{A} \overline{A} O \overline{B} \overline{B} \overline{B} O + A \overline{A} A O \overline{B} \overline{B} \overline{B} O + A \overline{A} A O \overline{B} \overline{B} \overline{B} O + A \overline{A} A O \overline{B} \overline{B} \overline{B} O$$

simplificando...

$$S = \overline{A} \overline{A} A O \overline{B} \overline{B} \overline{B} O + A \overline{A} \overline{A} O \overline{B} \overline{B} \overline{B} O + A \overline{A} \overline{A} O \overline{B} \overline{B} \overline{B} O + A \overline{A} A O \overline{B} \overline{B} \overline{B} O + A \overline{A} A O \overline{B} \overline{B} \overline{B} O + A \overline{A} A O \overline{B} \overline{B} \overline{B} O;$$

$$S = \overline{A} \overline{A} A O \overline{B} \overline{B} \overline{B} O + A \overline{A} (\overline{A} O \overline{B} \overline{B} \overline{B} O + \overline{A} O \overline{B} \overline{B} \overline{B} O + A O \overline{B} \overline{B} \overline{B} O + A O \overline{B} \overline{B} \overline{B} O + A O \overline{B} \overline{B} \overline{B} O);$$

$$S = \overline{A} \overline{A} A O \overline{B} \overline{B} \overline{B} O + A \overline{A} (\overline{B} \overline{B} (\overline{A} O \overline{B} O + \overline{A} O B O + A O \overline{B} O + A O B O) + A O \overline{B} \overline{B} \overline{B} O);$$

$$S = \overline{A} \overline{A} A O \overline{B} \overline{B} \overline{B} O + A \overline{A} (\overline{B} \overline{B} (1) + A O \overline{B} \overline{B} \overline{B} O);$$

$$S = \overline{A} \overline{A} A O \overline{B} \overline{B} \overline{B} O + A \overline{A} (\overline{B} \overline{B} + A O \overline{B} \overline{B} \overline{B} O);$$

$$S = \overline{A} \overline{A} A O \overline{B} \overline{B} \overline{B} O + A \overline{A} (\overline{B} \overline{B} + A O \overline{B} O);$$

$$S = \overline{A} \overline{A} A O \overline{B} \overline{B} \overline{B} O + A \overline{A} \overline{B} \overline{B} + A \overline{A} A O \overline{B} O;$$

$$S = A O (\overline{A} \overline{B} \overline{B} \overline{B} O + A \overline{B} \overline{B} O) + A \overline{A} \overline{B} \overline{B};$$

$$S = A O (\overline{B} O (\overline{A} \overline{B} \overline{B} + A \overline{B} \overline{B}) + A \overline{B} \overline{B});$$

$$S = A O (\overline{B} O (\overline{A} + \overline{B} \overline{B}) + A \overline{B} \overline{B});$$

$$S = A O (\overline{A} \overline{B} O + \overline{B} O \overline{B} \overline{B}) + A \overline{A} \overline{B} \overline{B}$$

Saida

$$S = A O \overline{A} \overline{B} O + A O \overline{B} O \overline{B} \overline{B} + A \overline{A} \overline{B} \overline{B}$$