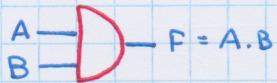


Sistemas Digitais

10/10/2018 - T

→ Portas lógicas

→ AND



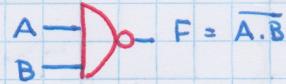
→ OR



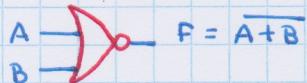
→ NOT



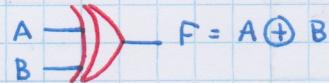
→ Função AND Negada - NAND



→ Função OR Negada - NOR



→ Função Exclusive OR - Ex. OR



→ Função Exclusive NOR - Ex. NOR



Testar que

$$\begin{array}{c} A \rightarrow D \rightarrow \\ \text{NAND} \\ \text{B} \end{array} \Leftrightarrow \begin{array}{c} A \rightarrow D \rightarrow \\ \text{NOR} \\ \text{B} \end{array} \quad F = \overline{\overline{A} + \overline{B}} \quad \downarrow \text{T9}$$

$$\overline{A \cdot B} = \overline{\overline{A} + \overline{B}}$$

Logo $F = \overline{A \cdot B}$

NAND e NOR são universais, pois conseguem-se partir deles para chegar a outras portas.

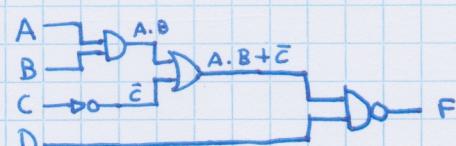
Exemplo:

$$\begin{array}{c} A \rightarrow D \rightarrow \\ \text{NAND} \\ \text{A} \end{array} \quad \bar{A} \cdot A = \bar{A} \quad \xrightarrow{\text{Para}} \quad A \rightarrow D \rightarrow \bar{A}$$

→ Circuitos integrados

$$F = \overline{(A \cdot B + \bar{C}) \cdot \bar{D}} \quad \rightarrow \text{Negação no final}$$

→ Diagrama lógico



→ Planta de montagem

