**Ficha 7**

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| **Flip-Flop JK ms, com base em (FF rs) com CLEAR PRESET (CLR PR)** |
| 1. Completa os espaços em branco |
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| A imagem representa um Flip-Flop do tipo Flip-Flop JK ms, com base em (FF rs) com CLEAR PRESET (CLR PR) com portas NANDJ significa SET e K significa RESET, ou seja, K Desliga a saída Q e J Liga a saída Q.CLEAR pode ser representado por CLR e faz RESET ao circuito independentemente do estado das estradas J, K e CLK. PRESET pode ser representado por PR e faz SET ao circuito independentemente do estado das estradas J, K e CLK. Quando PR e CLR estão em 0 o circuito entra em Inversão ou Toggle.Podemos dizer que as entradas CLR e PR “mandam” no circuito. ⃝ Verdadeiro ou ⃝ falso.Se o estado de PR’ e CLR’ for 1, a transição do Clock permite habilitar o MASTER e Desabilitar o SLAVE ou Desabilitar o MASTER e Habilitar o Slave.Este circuito entra em memória quando: CLR’=1, PR’=1, J=0, K=0 ou quando CLK=0 ou CLK=1Os FFjkMS funcionam na subida ou descida do Clok. Um FF que funciona pela borda de subida diz-se de transição positiva, um FF que funciona na borda de descida diz-se de transição negativa |

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| 2. Preenche a tabela de verdade

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| **Entradas** | **Saídas** | **Estado** |
| CLK | J | K | **PR’** | **CLR’** | Q | Q’ |  |
| x | x | x | 0 | 0 | 1 | 1 | Erro |
| x | x | x | 0 | 1 | 1 | 0 | Set |
| x | x | x | 1 | 0 | 0 | 1 | Reset |
| 0/1 | x | x | 1 | 1 | Qa | Qa’ | Mem. |
| ˄ | 0 | 0 | 1 | 1 | Qa | Qa’ | Mem. |
| ˄ | 0 | 1 | 1 | 1 | 0 | 1 | Reset |
| ˄ | 1 | 0 | 1 | 1 | 1 | 0 | Set |
| ˄ | 1 | 1 | 1 | 1 | Qa’ | Qa | Inversão*toggle* |

 | Clear = CLR faz RESET ao circuitoPreset = PR faz SET ao circuito |

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