**实验四 监控电路设计**

**一、实验数据记录**

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| **实验名称** | **实验四 监控电路设计** | | | |
| **器件** |  | | | |
| 1. **实验任务（1）：输入输出高有效监控电路（必做）**  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **真值表：**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Input** | | | **Output** | | | | **L** | **T** | **P** | **G\_LED** | **Y\_LED** | **R\_LED** | | **0** | **0** | **0** | **1** | **0** | **0** | | **0** | **0** | **1** | **1** | **1** | **0** | | **0** | **1** | **0** | **1** | **1** | **0** | | **0** | **1** | **1** | **1** | **0** | **1** | | **1** | **0** | **0** | **1** | **1** | **0** | | **1** | **0** | **1** | **1** | **0** | **1** | | **1** | **1** | **0** | **1** | **0** | **1** | | **1** | **1** | **1** | **0** | **1** | **1** | | | **输出信号卡诺图及表达式（需按照所要求逻辑门变化表达式）：**    **卡诺图：**  **G:**  **LT**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **P** | **00** | **01** | **11** | **10** | | **0** | **1** | **1** | **1** | **1** | | **1** | **1** | **1** | **0** | **1** |   **Y:**  **LT**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **P** | **00** | **01** | **11** | **10** | | **0** | **0** | **1** | **0** | **1** | | **1** | **1** | **0** | **1** | **0** |   **R：**  **LT**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **P** | **00** | **01** | **11** | **10** | | **0** | **0** | **0** | **1** | **0** | | **1** | **0** | **1** | **1** | **1** | | | **电路及波形仿真结果：**  **电路图（部分）：**    **波形图：** |  1. **实验任务（2）：输入输出低有效监控电路（选做）** | | | | |
| **真值表：**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Input** | | | **Output** | | | | **L** | **T** | **P** | **G\_LED** | **Y\_LED** | **R\_LED** | | **0** | **0** | **0** | **0** | **1** | **1** | | **0** | **0** | **1** | **1** | **0** | **1** | | **0** | **1** | **0** | **1** | **0** | **1** | | **0** | **1** | **1** | **1** | **1** | **0** | | **1** | **0** | **0** | **1** | **0** | **1** | | **1** | **0** | **1** | **1** | **1** | **0** | | **1** | **1** | **0** | **1** | **1** | **0** | | **1** | **1** | **1** | **1** | **0** | **0** | | | | | |
| **输出信号卡诺图及表达式（需按照所要求逻辑门变化表达式）：**  **表达式：**    **卡诺图：**  **LT**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **P** | **00** | **01** | **11** | **10** | | **0** | **0** | **0** | **0** | **0** | | **1** | **0** | **0** | **1** | **0** |   **Y：**  **LT**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **P** | **00** | **01** | **11** | **10** | | **0** | **1** | **0** | **1** | **0** | | **1** | **0** | **1** | **0** | **1** |   **R：**  **LT**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **P** | **00** | **01** | **11** | **10** | | **0** | **1** | **1** | **0** | **1** | | **1** | **1** | **0** | **0** | **0** | | | | | |
| **电路及波形仿真结果：**  **电路图：**    **波形图：** | | | | |
| **故障记录（记录实验过程中的故障现象及解决方案）** | | | | |
| **实验成绩** | |  | **指导老师签字** |  |