

Lecture Lec01.ppt in class worksheet

Question 1. What is the range of voltages that represent logic low?

Question 2. What is the range of voltages that represent logic high?

Question 3. What is the difference between positive and negative logic?

Question 4. What voltage activates a P-type transistor?

Question 5. What voltage activates an N-type transistor?

Question 6. What is the difference between volatile and nonvolatile memory?

Question 7. What is flash?

Question 8. How much RAM and ROM does our microcontroller have?

Question 13. What is a flowchart?

Question 14. What is a data flow graph?

Question 15. What is a call graph?

~~Question 16. What is special about Register 13? Register 14? Register 15?~~

~~Question 17. In 20 words or less describe the differences between von Neumann and Harvard architectures.~~

~~Question 18. What happens when you load a value into Register 15 with bit 0 set?~~

Answer 1. 从0.0 到1.155V 是低电压

Answer 2. 从2.145 到 5 V 之间的被称为高电压

Answer 3. 真实状态的电压比错误状态电压高就是positive, 反之就是negative。

Answer 4. 一个从源到门的正电压可以启动一个P-type transistor

Answer 5. 一个从源到门的正电压可以启动一个 N-type transistor

Answer 6. Ohm's Law is $V=I \cdot R$. Ohm's Law applies to resistors

Answer 7. 不提供电源的时候Volatile memory会释放信息并且重新储存。
Nonvolatile memory则会保留信息

Answer 8. The TM4C123 has 32 kibibytes of RAM and 256 kibibytes of ROM

Answer 13. flowchart就是利用图形描述软件算法和表示步骤

Answer 14. data flow graph就是利用图形描述系统中的进程。数据先到达输入端口, 通过软件控制后从输出端口离开系统。

Answer 15. call graph就是利用图形描述软件模块的链接