**Operating Systems**

1. **Summarize the booting procedure (include steps including CPU, ROM, RAM, secondary storage**) Identify 3 things that get loaded into RAM in order.
2. **Summarize the difference between a program and a process and a thread.**
3. **If each time slice in a multiprogramming system is 50 milliseconds and each context switch requires at most a microsecond, how many processes can the machine service in a single second?**
4. **Suppose a two-lane road converges to one lane to pass through a tunnel. To coordinate the use of the tunnel, the following signal system has been installed:**

**A car entering either end of the tunnel causes red lights above the tunnel entrances to be turned on. As the car exits the tunnel, the lights are turned off. If an approaching car finds a red light on, it waits until the light is turned off before entering the tunnel.**

**What is the flaw in this system?**