

mean 5.9
median 6

Score: _____ Name: _____

ECE 3055 Quiz - November 13, 2002

Pts

2

1. The long-term scheduler in an Operating System attempts to control the degree of multiprogramming.

- 1 scheduler or medium-term scheduler

2

2. What hardware prevents a user application from talking directly to I/O devices in a multiprogramming OS? Explain exactly how it works

1pt. Privileged I/O instructions with a Mode bit.

1pt. When the mode bit is set to user mode, I/O instructions are not executed and an error interrupt occurs whenever a user program attempts to execute an I/O instruction. The mode bit is only set to system mode in the OS kernel code that executes I/O instructions. All user I/O must be done using API calls.

1

3. Why would multiprogramming make economic sense even in a computer system running only batch jobs?

Multiprogramming will increase CPU utilization. If one process is waiting on I/O, another process can run.

3

4. List the three types of common events that will move a process out of the run state.

- A. A Process terminates
- B. A Time Slice Interrupt
- C. Process makes an API I/O call

2

5. Would a long CPU bound job be inserted more often in the ready queue or the wait queue (explain)?

The Ready Queue - It would run until a time slice interrupt and be inserted back into the ready queue several times.