

HOMEWORK 1

CSE 120 OPERATING SYSTEMS FALL 2006

DUE ON 10/03/2006 (TUESDAY) AT THE BEGINNING OF CLASS

- 1) [Silberschatz 7th Edition - Chapter 1 - Q 1.10] What is the purpose of interrupts? What is the difference between a trap and an interrupt? Can traps be generated intentionally by a user program? If so, for what purpose?
- 2) Compare and contrast between the two common models of inter-process communication.
- 3) [Silberschatz 7th Edition - Chapter 3 - Q 3.2] Describe the actions taken by a kernel to context-switch between processes.
- 4) List two challenges an OS faces when passing parameters between user and kernel mode. Describe how an OS can overcome them.
- 5) Give 2 reasons why memory protection is so critical for an operating system. What kinds of protection must a typical operating system provide?
- 6) What would be the expected behavior if a privileged instruction is executed in user mode? In a typical operating system, should there be a privileged instruction to switch to kernel mode?