

Topics possibly covered (definitely not an exhaustive list!!!)

- 1) Process/Kernel
 - a) Microkernel versus Monolithic
 - b) Kernel-level versus user-level
 - c) Number of kernel threads in Minix
- 2) System Calls
 - a) System calls versus Function calls
 - b) What do they allow the user to do?
- 3) Context Switching
 - a) What is a context switch?
 - b) What happens when a context-switch occurs?
- 4) Scheduling
 - a) Minix process scheduling
 - i) 3 queues (what is the priority?)
 - ii) round robin
 - b) Lottery scheduling
 - c) Lottery scheduling w/ticket sharing
 - d) Preemptive versus non-preemptive – advantages/disadvantages
- 5) Mutual Exclusion and Deadlock
 - a) safety
 - b) liveness
 - c) semaphores – definition
 - d) busy wait
 - e) Deadlock prevention
- 6) Input/Output
 - a) disk scheduling – FCFS, SSTF, SCAN
 - b) blocking versus non-blocking
- 7) Priority Ceiling
 - a) Priority inversion definition – what is it and how is it caused?
- 8) Virtual Memory
 - a) Page replacement schemes
 - i) LRU B.
 - ii) FIFO C.
 - iii) Second Chance
 - b) TLB – what is it?
 - c) Inverted page table
 - i) Calculate (see slide 29) entries in virtual page table and physical page table.
- 9) Anything else that might make decent multiple choice questions ☹