What is the cache access time formula?

\[ EAT = P_{hit}T_{hit} + P_{miss}T_{miss} \]
When the OS is spending all of its time swapping.

What is thrashing?
An abstraction that makes writing distributed programs easier.

What is RPC?
The difference between RAM, disk, and tape.

What is the cost of random access?
Procs/Threads - 100

Multiple process in memory at the same time.

What is multi-programming?
Procs/Threads - 200

The structure containing the PID, UID, and the process state.

What is the PCB?
Procs/Threads - 300

The PC, registers, SP, and stack.

What is the state of a thread?
The process state with no transitions to running.

What is waiting?
If there are multiple threads accessing shared data.

When is synchronization necessary?
Sync - 200

The only sync. primitive that is “held” by a thread.

What is a lock?
Sync - 300

The two things synchronization can provide.

What are inter-thread scheduling and mutual exclusion?
An operation that can be repeated without changing the outcome.

What is an idempotent operation?
The set of virtual addresses a process can reference.

What is a process’s address space?
The allocation scheme with no internal fragmentation.

What is base+bounds?
The property that an algorithm must have to avoid Beladay’s anomaly.

What is the stack property?
Increasing page size would increase it.

What is internal fragmentation?
Seek time + Rotational delay
+ Transfer time

What is the disk access time?
Disk/FS - 200

Names and inode numbers.

What are the contents of a directory entry on UNIX?
The disk scheduling algorithm most commonly used in practice?

What is CSCAN?
File growth may be extremely expensive.

What is the disadvantage of contiguous allocation?