**Exam #2 Review**

* Multi-threading Many-to-One, One-to-One, Many-to-Many Models.
* Threads
  + When to use threads, and when to use Processes.
* Thread pool.
* OpenMP.
* Parallelism, concurrency, data parallelism, & task parallelism.
* User level & kernel level threads.
* Thread cancellation.
* Preemptive and non-preemptive scheduling.
* Compute the average waiting for the First-Come First-Served (FCFS), Shortest-Job-First (SJF), Nonpreemptive Priority Scheduling, Round Robin (RR) scheduling algorithms.
* Bounded buffer.
* Multilevel Queue.
* Multilevel Feedback Queue.
* Race condition.
* Peterson’s solution – what the variables are used for / indicate?
* Mutex lock.
* Spinlock.
* Binary semaphore.
* Counting semaphore.
* Priority inversion.
* pthread mutex lock & unlock.
* First Readers-Writers problem.
* Dining-Philosophers Problem.
* Monitor.