

CSC369H1 F L0101

Question 1. [7 MARKS]

Each of the following statements is **false**. In one sentence, explain why. (If you disagree that the statement is false, provide your reasoning.)

Part (a) [1 MARK] A system call is invoked in the same manner as a user function.

Part (b) [1 MARK] Malloc and free must maintain data structures that track all free and allocated blocks of memory. Otherwise, memory could be leaked (lost).

Part (c) [1 MARK] If two threads access a shared variable at the same time, there will be a concurrency error.

Part (d) [1 MARK] As seen in Exercise 6, hand-over-hand locking will always be slower than a single lock for the entire data structure.

Part (e) [1 MARK] Interactive systems should use non-preemptive scheduling algorithms.

Part (f) [1 MARK] If we can reasonably predict how long a job will run, then Shortest Job First (or Shortest Time to Completion First) is a good policy for minimizing response time.

Part (g) [1 MARK] A trap instruction is a privileged operation.