

Your Name:	
SID:	CS162 login:
TA:	Discussion Section:
Score:	

This is a **closed book and notes** ten-minute quiz. Write all of your answers directly on this paper.

Good Luck!!

1. (8 points total) True/False. Circle the correct answer for each of the following questions.

- a. If a set of cooperating threads can correctly share a single core uniprocessor, then they will correctly execute if run on separate processors of a shared-memory multiprocessor.

TRUE

FALSE

False. Threads can use disabling of interrupts to cooperate on a uniprocessor, but that may not work correctly on multiprocessors.

- b. Dual-mode operation is required to protect the operating system in a multiprogrammed system.

TRUE

FALSE

False. Software fault isolation techniques can be used to protect the OS from malicious programs.

2. (6 points) Where is the optimal place on the disk for the directory blocks?

1. Near the outer edge of the disk
2. In the middle of the disk
3. Near the inner edge of the disk

_____ *#2. On average, the disk arm will be near the middle of the disk, making directory accesses less expensive.*

3. (6 points) Match the terms in column A with the most appropriate definition from column B.

Column A

Column B

1. Synchronization

a. Piece of code that only one thread can execute at once

2. Mutual exclusion

b. Ensuring that only one thread does a particular thing at a time

3. Critical section

c. Isolating program faults to an address space
d. Using atomic operations to ensure cooperation between threads

1. ***d***

2. ***b***

3. ***a***