

Name: \_\_\_\_\_

### Quiz 6

1. How does file metadata differ from file data? Give an example of file metadata stored in a filesystem.

**File data stores the logical data the file represents (or that the user associates with the file). File metadata stores data about the file. Examples of metadata include the location of the file data on disk, timestamps, user and group owners, file name, file identifier, permissions, and ACLs.**

2. What is the maximum size of a file in a file system using indexed allocation with a single indirect block with a block size of 8KB and 64-bit (8 byte) block pointers?

**A single 8KB block can hold  $8\text{KB} / 8 = 1024$  block pointers. 1024 8KB block pointers hold  $8\text{KB} * 1024 = 8\text{MB}$  of data.**

3. Suppose that a disk drive has 5,000 cylinders, numbered 0 to 4999, with the read-write head having just finished a request at cylinder 1576. The queue of pending requests, in order of arrival, is:

1421, 4316, 176, 4203, 1778, 3591

Starting from the current head position, what is the order in which the requests will be serviced for each of the following disk-scheduling algorithms (assuming no other requests arrive and the head's initial movement is toward higher numbered cylinders for c-f)?

a. FCFS	b. SSTF	c. SCAN	d. LOOK	e. C-SCAN	f. C-LOOK
1421	1421	1778	1778	1778	1778
4316	1778	3591	3591	3591	3591
176	176	4203	4203	4203	4203
4203	3591	4316	4316	4316	4316
1778	4203	1421	176	1421	176
3591	4316	176	1421	176	1421