

CS471: Operating System Concepts

Fall 2006

(Lecture: TR 11:25-12:40 PM)

Homework #7

Points: 20

Due: October 19, 2006

Question 1 [Points 2] 10.3

Question 2 [Points 2] 10.7

Question 3 [Points 2] 10.9

Question 4 [Points 8] The following sequence of operations are to be executed on a file of 10 kbytes, occupying 10 blocks on a disk (1 block = 1kbytes). Determine the number of disk accesses required for each operation for (a) Contiguous allocation (b) Linked allocation (c) Indexed allocation (assume that the index is already in main memory)

Operations:

(i) Read block 5

(ii) Update block 8

(iii) Insert a new block between 4 and 5 (assume that there is enough space preallocated in the contiguous allocation case for this file; the additional space is contiguous to the current blocks).

(iv) Delete block 2

Question 5 [Points 2] 11.3

Question 6 [Points 4] 11.6