OS Assignment 5   Date 07-11-16

1. How UNIX uses consistency semantics and session semantics in Andrew file system? How immutable shared file semantics work?

2. Disk requests come in to the disk driver for cylinders 10, 22, 20, 2, 40, 6, and 38, in that order. A seek takes 6 msec per cylinder moved. How much seek time need for:
          (a) SSTF   (b) SCAN (initially moving upward)
In all cases, the arm is initially at cylinder 20.

3. Suppose that a disk drive has 5,000 cylinders, numbered 0 to 4999. The drive is currently serving a request at cylinder 143. The queue of pending requests, in FIFO order, is:
                86, 1470, 913, 1774, 948, 1509, 1022, 1750, 130
Starting from the current head position, what is the total distance (in cylinders) that the disk arm moves to satisfy all the pending requests for each of the following disk-scheduling algorithms?
  (a) LOOK   (initially moving upward)   (b) C-LOOK (initially moving upward)

4A. Explain the principles of protection.   2M
4B. Explain the uses of an Access Matrix.   2M

5A.Explain clone() system call in Linux. Also write how Linux fork() and clone() system calls are related.   2M
5B.What is the advantages and disadvantages of making only some of the symbols defined inside a kernel accessible to a loadable kernel module?   2M