1. Suppose that a disk drive has 5000cylinders, numbered 0 to 4999. The drive is currently serving a request atcylinder 143, and the previous request was at cylinder 125. The queue ofpending 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 satisfyall the pending requests, for each of the following disk-scheduling algorithms?

a. FCFS：The total seek distanceis _____.

b. SSTF：The total seek distanceis _____.

c. SCAN：The total seek distanceis _____.

d. LOOK：The total seek distanceis _____.

e. C-SCAN：The total seek distanceis _____.

f. C-LOOK：The total seek distanceis _____.

填空题 (19 分)　　12.7 分　　(请按题目中的空缺顺序依次填写答案)

(1) | 7081

(2) | 1745

(3) | 1917　　　　　　　　　　　　回答错误

(4) | 1745　　　　　　　　　　　　回答错误

(5) | 9985

(6) | 3363

正确答案:

(1) 7081

(2) 1745

(3) 9769

(4) 3319

(5) 9985

(6) 3363

a. The FCFS scheduleis 143, 86, 1470, 913, 1774, 948, 1509, 1022,1750, 130. The total seek distanceis 7081.

b. The SSTF scheduleis 143, 130, 86, 913, 948, 1022, 1470, 1509, 1750,1774. The total seek distanceis 1745.

c. The SCAN scheduleis 143, 913, 948, 1022, 1470, 1509, 1750, 1774,4999, 130, 86. The total seekdistance is 9769.

d. The LOOK scheduleis 143, 913, 948, 1022, 1470, 1509, 1750, 1774,130, 86. The total seek distanceis 3319.

e. The C-SCAN scheduleis 143, 913, 948, 1022, 1470, 1509, 1750, 1774,4999, 86, 130. The total seekdistance is 9985.

f. The C-LOOK scheduleis 143, 913, 948, 1022, 1470, 1509,1750, 1774, 86, 130. The total seek distanceis 3363.

2. Which of the following storage device does not belong to the tertiary storage structure?

单选题 (9 分)　　9分

A. CD-ROM

B. DVD

C. Hard disks

D. Tapes

正确答案: C

3. Which provides high reliabilityinexpensively?

单选题 (9 分)　　9分

A. RAID 0

B. RAID 2

C. RAID 4

D. RAID 5

正确答案: D

4. Which kind of swap space is fastest?

单选题 (9 分)　　9分

A. A swap file on FAT

B. A swap file on ext3

C. A partition with sophisticated file systemfunctions

D. A raw partition

正确答案: D

5. Linux treats I/O devices as _____.

单选题 (9 分)　　9分

A. regular files

B. directory files

C. indexed files

D. special files

正确答案: D

6. _____ present a uniform device-accessinterface to the I/O subsystem, much as system calls provide a standardinterface between the application and the operating system.

单选题 (9 分)　　9分

A. Kernel

B. Device drivers

C. Bus

D. Operating system

正确答案: B

7. The I/O control of disk devices mainlyadopt following method.

单选题 (9 分)　　9分

A. polled

B. interrupt

C. channel

D. DMA

正确答案: D

8. Disk access time does not include _____ .

单选题 (9 分)　　9分

A. seek time

B. rotational latency time

C. read/write time

D. CPU scheduling time

正确答案: D

9. _____ is used to cope with the speedmismatch between CPU and I/O devices.

单选题 (9 分)　　9分

A. buffering

B. parallel

C. caching

D. semaphore

正确答案: A

10. In the disk scheduling algorithm, whichalgorithm may change the arm's movement direction at any moment?

单选题 (9 分)　　9分

A. C-SCAN

B. SSTF

C. SCAN

D. none of the above

正确答案: B