Started on	Thursday, 27 April 2023, 2:31 PM
State	Finished
Completed on	Thursday, 27 April 2023, 2:37 PM
Time taken	6 mins 1 sec
Grade	**30.00** out of 30.00 (**100**%)

Information

The theory part of this exam uses free navigation when presenting the questions.

Information

SECTION 1. True or False questions (2 points each)

Question **1**

Correct

Mark 2.00 out of 2.00

On a fixed partitioning memory system, the number of processes in main memory can be greater than the number of partitions.

Select one:

○ True

◉ False ✔

Question **2**

Correct

Mark 2.00 out of 2.00

Internal fragmentation is not possible on a system using simple segmentation.

Select one:

◉ True ✔

○ False

Question **3**

Correct

Mark 2.00 out of 2.00

The Translation Lookaside Buffer (TLB) is used to overcome the effect of doubling the memory access time.

Select one:

◉ True ✔

◯ False

Question **4**

Correct

Mark 2.00 out of 2.00

The rate monotonic scheduling algorithm selects the tasks with the highest rate.

Select one:

◉ True ✔

◯ False

Question **5**

Correct

Mark 2.00 out of 2.00

C-SCAN (disk scheduling algorithm) restricts the scanning of the tasks to one direction only

Select one:

◉ True ✔

◯ False

Question **6**

Correct

Mark 2.00 out of 2.00

A bit table (disk free space management) uses one bit for each block on the disk.

Select one:

◉ True ✔

◯ False

Information

SECTION 2. Simple choice questions (3 points each)

Question **7**

Correct

Mark 3.00 out of 3.00

Given a system using dynamic partitioning as a memory management technique, select the free partition that is chosen by the best-fit placement algorithm for a memory request of 16 MB.

Select one:

- ● a.   Free Partition Size = 18 MB ✔
- ○ b.   Free Partition Size = 19 MB
- ○ c.   Free Partition Size = 15.9 MB
- ○ d.   Free Partition Size = 15 MB

Question **8**

Correct

Mark 3.00 out of 3.00

In the two-handed clock page replacement algorithm (UNIX SVR4), if the front-hand finds a page with the reference bit equal to zero, then:

Select one:

- ○ a.   The page gets replaced
- ● b.   The reference bit remains unchanged ✔
- ○ c.   The frame is locked
- ○ d.   The reference bit is set to 1

Question **9**

Correct

Mark 3.00 out of 3.00

Select the memory management technique which is visible to the programmer.

Select one:

○ a.   Segmentation✔

○ b.   Paging

○ c.   Fixed partitioning

○ d.   None of the above

Question **10**

Correct

Mark 3.00 out of 3.00

Select the approach to thread scheduling that carries over most directly from a uniprocessor environment

Select one:

○ a.   Load sharing✔

○ b.   Dedicated processor assignment

○ c.   Gang scheduling

○ d.   Dynamic scheduling

Question **11**

Correct

Mark 3.00 out of 3.00

Select the block-oriented device:

Select one:

○ a.   Printer

○ b.   Disk✔

○ c.   Communications Port

○ d.   None of the above

Question **12**

Correct

Mark 3.00 out of 3.00

Assuming that the disk head is located at track 100, select next track chosen by the shortest service time first (SSTF) algorithm

Select one:

- a. 160
- b. 115
- c. 10
- d. 90 ✔

◄ Extra credit question - Deadlocks

Jump to...

Algorithms' Part (70 points) ►