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

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

Question 1  
Complete  
Mark 2.00 out of 2.00  
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The best-fit placement algorithm (dynamic partitioning), chooses the block that is closest in size to the request.

Select one:

- ☒ True  
☐ False

The correct answer is 'True'.

Question 2  
Complete  
Mark 2.00 out of 2.00  
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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

The correct answer is 'False'.

Question 3  
Complete  
Mark 2.00 out of 2.00  
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The Translation Lookaside Buffer (TLB) is used to overcome the effect of doubling the memory access time.

Select one:

- ☒ True  
☐ False

The correct answer is 'True'.

Question 4  
Complete  
Mark 2.00 out of 2.00  
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The rate monotonic scheduling algorithm selects the tasks with the highest rate.

Select one:

- ☒ True  
☐ False

The correct answer is 'True'.

Question 5  
Complete  
Mark 2.00 out of 2.00  
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A block-oriented device transfers data in and out as a stream of bytes

Select one:

- ☐ True  
☒ False

The correct answer is 'False'.

Question 6  
Complete  
Mark 2.00 out of 2.00  
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A bit table (disk free space management) uses one bit for each block on the disk.

Select one:

- ☒ True  
☐ False

The correct answer is 'True'.

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## SECTION 2. Simple choice questions (3 points each)

Question 7  
Complete  
Mark 3.00 out of 3.00  
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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 = 15.9 MB  
☒ b. Free Partition Size = 18 MB  
☐ c. Free Partition Size = 15 MB  
☐ d. Free Partition Size = 19 MB

The correct answer is: Free Partition Size = 18 MB

Question 8  
Complete  
Mark 3.00 out of 3.00  
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The resident set management combination where the page to be replaced is chosen from all available frames in main memory is:

Select one:

- ☐ a. Fixed Allocation - Local Replacement  
☐ b. Variable Allocation - Local Replacement  
☐ c. Fixed Allocation - Global Replacement  
☒ d. Variable Allocation - Global Replacement

The correct answer is: Variable Allocation - Global Replacement

Question 9  
Complete  
Mark 0.00 out of 3.00  
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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 reference bit remains unchanged  
☐ b. The frame is locked  
☐ c. The page gets replaced  
☒ d. The reference bit is set to 1

The correct answer is: The reference bit remains unchanged

Question 10  
Complete  
Mark 3.00 out of 3.00  
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Select the approach to thread scheduling that carries over most directly from a uniprocessor environment

Select one:

- ☐ a. Gang scheduling  
☒ b. Load sharing  
☐ c. Dynamic scheduling  
☐ d. Dedicated processor assignment

The correct answer is: Load sharing

Question 11  
Complete  
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Select the block-oriented device:

Select one:

- ☐ a. Printer  
☒ b. Disk  
☐ c. Communications Port  
☐ d. None of the above

The correct answer is: Disk

Question 12  
Complete  
Mark 3.00 out of 3.00  
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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. 90  
☐ c. 115  
☐ d. 10

The correct answer is: 90

Finish review