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Unit 12 - Week 11: Memory Sub-system Organization

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Assignment for Week 11

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment.

Due on 2019-04-17, 23:59 IST.

1) Which of the following page replacement algorithms suffers from Belady's anomaly? **1 point**

- ☐ FIFO
- ☐ LRU
- ☐ Optimal Page Replacement
- ☐ Both LRU and FIFO

No, the answer is incorrect.

Score: 0

Accepted Answers:

FIFO

2) Assume that there are 3 page frames which are initially empty. If the page reference string is 1,2,3,4,2,1,5,3,2,4,6,5, what will be the number of page faults using the optimal page replacement policy? **1 point**

- ☐ 6
- ☐ 7
- ☐ 4
- ☐ 8

No, the answer is incorrect.

Score: 0

Accepted Answers:

8

3) Locality of reference implies that the page reference being made by a process :

1 point

- ☐ will always be to the page used in the previous page reference

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and Optimization of Micro-programmed Controlled Control Unit

Week 8: Organization and Optimization of Micro-programmed Controlled Control Unit

Week 9: Memory Sub-system Organization

Week 10: Memory Sub-system Organization

Week 11: Memory Sub-system Organization

Cache Indexing and Tagging Variations, Demand Paging

Page Replacement Algorithms

Page Frame Allocation and Thrashing

Summary

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Week 12: Input/output Subsystem

TEXT TRANSCRIPTS

Accepted Answers:

is likely to be one of the pages used in the last few page references

4) For the reference string 1, 2, 1, 3, 7, 4, 5, 6, 3, 1, how many more page faults occur with LRU than with the optimal page replacement policy? **1 point**

- ☐ 0
☐ 1
☐ 2
☐ 3

No, the answer is incorrect.

Score: 0

Accepted Answers:

2

5) The optimal page replacement algorithm will select the page that

- ☐ Has not been used for the longest time in the past.
☐ Will not be used for the longest time in the future.
☐ Has been used least number of times.
☐ Has been used most number of times

No, the answer is incorrect.

Score: 0

Accepted Answers:

Will not be used for the longest time in the future.

6) The accuracy of the working set depends on the selection of :

- ☐ working set model
☐ working set size
☐ memory size
☐ number of pages in memory

No, the answer is incorrect.

Score: 0

Accepted Answers:

working set size

7) Consider a virtual memory system with FIFO page replacement policy. For an arbitrary page access pattern, increasing the number of page frames in main memory will **1 point**

- ☐ always decrease the number of page faults
☐ always increase the number of page faults
☐ sometimes increase the number of page faults
☐ never affect the number of page faults

No, the answer is incorrect.

Score: 0

Accepted Answers:

sometimes increase the number of page faults

8) In the working set model, for :
 2 6 1 5 7 7 7 5 1 6 2 3 4 1 2 3 4 4 4 3 4 3 4 4 4 1 3 2 3
 if DELTA = 10, then the working set at time t1 (....7 5 1) is :

- ☐ {1, 2, 4, 5, 6}

- ☐ {2, 1, 6, 7, 3}
- ☐ {1, 6, 5, 7, 2}
- ☐ {1, 2, 3, 4, 5}

No, the answer is incorrect.

Score: 0

Accepted Answers:

{1, 6, 5, 7, 2}



9) If working set window is too small :

1 point

- ☐ it will not encompass entire locality
- ☐ it may overlap several localities
- ☐ it will cause memory problems
- ☐ none of the mentioned



No, the answer is incorrect.

Score: 0

Accepted Answers:

it will not encompass entire locality

10) The algorithm by which we allocate memory to each process according to its size is known as: 1 point

- ☐ Proportional allocation algorithm
- ☐ Split allocation algorithm
- ☐ Equal allocation algorithm
- ☐ None of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

Proportional allocation algorithm

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