CSPB 3753 - Fall 2024 - Knox - Operating Systems

Started on	Monday, 18 November 2024, 11:28 PM
State	Finished
Completed on	Monday, 18 November 2024, 11:32 PM
Time taken	3 mins 43 secs
Grade	**10** out of 10 (**100**%)

Question **1**

Correct

Mark 1 out of 1

Which of the following best describes Belady's Anomaly?

Select one:

- ○ a. Decreasing the frame size increases the number of page faults
- ◉ b. Increasing the number of available frames increases the number of page faults ✔ Increasing the number of available frames increases the number of page faults
- ○ c. Increasing the frame size increases the number of page faults
- ○ d. Decreasing the number of available frames increases the number of page faults

Your answer is correct.

The correct answer is: Increasing the number of available frames increases the number of page faults

Question **2**

Correct

Mark 1 out of 1

Global page replacement selects

Select one:

○ a. a page from the current process

○ b. the least shared page

◉ c. any page from any process   ✓

○ d. any page in memory

Your answer is correct.

The correct answer is: any page from any process

Question **3**

Correct

Mark 1 out of 1

Demand paging demands that all of a processes' pages are either swapped in or out at a given time.

Select one:
○ True
◉ False ✓

The correct answer is 'False'.

Question **4**

Correct

Mark 1 out of 1

The invalid bit is used for detecting:

Select one:

- ⦿ a. if a page is not in memory   ✔
- ○ b. if a page does not exist anywhere
- ○ c. if a page has been modified
- ○ d. if a page is corrupted

Your answer is correct.

The correct answer is: if a page is not in memory

Question **5**

Correct

Mark 1 out of 1

Modify or dirty bit in a page table is used to reduce the number of disk accesses to read or write a page

Select one:
- ⦿ True ✔
- ○ False

The correct answer is 'True'.

Question **6**

Correct

Mark 1 out of 1

A process is said to be "thrashing" if it spends more time executing than paging

Select one:
- ○ True
- ⦿ False ✔

The correct answer is 'False'.

Question **7**

Correct

Mark 1 out of 1

Which of the following are true about working sets?

☑

a. determines the set of pages accessed within a timeframe

✔

☑

b. number of pages will change with size of timeframe

✔

☑

c. too large of a timeframe may overlap multiple working sets

✔

☐

d. causes more page thrashing

☐

e. has the same number of pages for all timeframes

> Your answer is correct.
>
> The correct answers are: determines the set of pages accessed within a timeframe, number of pages will change with size of timeframe, too large of a timeframe may overlap multiple working sets

Question **8**

Correct

Mark 1 out of 1

Assume primary memory has 3 page frames all of which are empty. For the following sequence of page references, calculate the number of page faults under the FIFO. [Please input an integer value]
Sequence: 1, 2, 3, 1, 4, 1, 2, 4, 2, 4, 3

Answer: 7   ✔
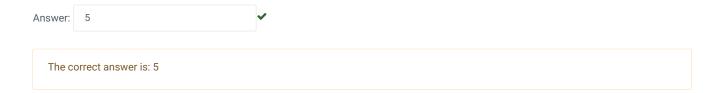
> The correct answer is: 7

Question **9**

Correct

Mark 1 out of 1

Assume primary memory has 3 page frames all of which are empty. For the following sequence of page references, calculate the number of page faults under the OPTIMAL algorithm. [Please input an integer value]
Sequence: 1, 2, 3, 1, 4, 1, 2, 4, 2, 4, 3

Answer: 5   ✔

The correct answer is: 5

Question **10**

Correct

Mark 1 out of 1

Assume primary memory has 3 page frames all of which are empty. For the following sequence of page references, calculate the number of page faults under the LRU. [Please input an integer value]
Sequence: 1, 2, 3, 1, 4, 1, 2, 4, 2, 4, 3

Answer: 6   ✔

The correct answer is: 6