

OS 隨堂測驗 608

1. (**D**) Which of the following is a benefit of allowing a program that is only partially in memory to execute?
 - A) Programs can be written to use more memory than is available in physical memory.
 - B) CPU utilization and throughput is increased.
 - C) Less I/O is needed to load or swap each user program into memory.
 - D) **All of the above**
2. (**B**) Suppose we have the following page accesses: 1 2 3 4 2 3 4 1 2 1 1 3 1 4 and that there are three frames within our system. Using the FIFO replacement algorithm, what is the number of page faults for the given reference string?
 - A) 14
 - B) **8**
 - C) 13
 - D) 10
3. (**A**) _____ allows the parent and child processes to initially share the same pages, but when either process modifies a page, a copy of the shared page is created.
 - A) **copy-on-write**
 - B) zero-fill-on-demand
 - C) memory-mapped
 - D) virtual memory fork
4. (**D**) _____ is the algorithm implemented on most systems.
 - A) FIFO
 - B) Least frequently used
 - C) Most frequently used
 - D) **LRU**
5. (**D**) Belay's anomaly states that _____.
 - A) giving more memory to a process will improve its performance
 - B) as the number of allocated frames increases, the page-fault rate may decrease for all page replacement algorithms
 - C) for some page replacement algorithms, the page-fault rate may decrease as the number of allocated frames increases
 - D) **for some page replacement algorithms, the page-fault rate may increase as the number of allocated frames increases**

6. (**B**) Optimal page replacement ____.

A) is the page-replacement algorithm most often implemented

B) **is used mostly for comparison with other page-replacement schemes**

C) can suffer from Belady's anomaly

D) requires that the system keep track of previously used pages

7. __**X**__ In general, virtual memory decreases the degree of multiprogramming in a system.

8. __**O**__ On a system with demand-paging, a process will experience a high page fault rate when the process begins execution.

9. __**O**__ A page fault must be preceded by a TLB miss.

10. Explain the usefulness of a modify bit.

表示這個 page 被改過，如果這個 page 被 replacement 那要寫回硬碟，若沒有就直接扔掉