练习6 (第8、9章)

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#1 Points possible: 3

_______ memory allocation scheme may produce external fragmentation.

○ Demand

○ system halts

● Multiple-partition

○ None of above

#2 Points possible: 3

A demand paging system adopts the LRU page replacement algorithm. Consider a reference string 1 8 1 7 8 2 7 2 1 8 3 8 2 1 3 1 7 1 3 7. The total number of page faults given 4 initially empty page frames is ________.

○ 4

○ 5

● 6

○ 7

#3 Points possible: 3

After a page fault handled, ________ should be executed.

○ the instruction just before interruption

● the instruction caused interruption

○ the instruction just after interruption

○ The first instruction of this process

#4 Points possible: 3

Assume that the probability of page fault is 0.1%, memory access time is 100ns, and the average page fault service time is 25 ms, then the effective access time is _____.

○ 125μs

○ 115ms

● 25μs

○ 25ms

#5 Points possible: 3

Considering a system, which uses virtual memory. At what point can address binding be done?

○ compile time

○ load time

● execution time

○ can be any of the above

#6 Points possible: 3

Consider a paging system that mappes logical address space of 8 pages with 1024 bytes each page to a physical memory of 32 frames, the logical address is of ___ and the physical address is of ___.

○ 10 bits, 5 bits

○ 3 bits, 15 bits

○ 13 bits ,5 bits

● 13 bits, 15 bits

#7 Points possible: 3

Dynamic relocation relies on ____.

● a relocation register

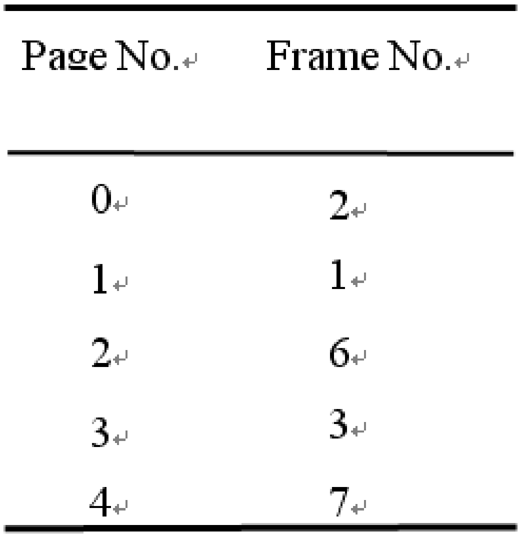
○ object code

○ dynamic link libraries

○ relocation program

#8 Points possible: 3

In a paging memory management system, there is a page table as



Page No.	Frame No.
0	2
1	1
2	6
3	3
4	7

following:
If the page size is 4KB, then paging address hardware will convert logical address 10 into physical address _____。

● 8202

○ 4106

○ 2058

○ 1034

#9 Points possible: 3

assume that a task is divided into 4 equal-sized segments, and that the system builds an 8-entry page table for each segment. Therefore, the system has a combination of segmentation and paging. Assume also that the page size is 2Kbytes.
What is the maximum size of each segment?

○ 2Kbytes

○ 4Kbytes

○ 8Kbytes

● 16Kbytes

#10 Points possible: 3

assume that a task is divided into 4 equal-sized segments, and that the system builds an 8-entry page table for each segment. Therefore, the system has a combination of segmentation and paging. Assume also that the page size is 2Kbytes.
What is the maximum logical address space for the task?

○ 8Kbytes

○ 16Kbytes

○ 32Kbytes

● 64Kbytes

#11 Points possible: 3

Implementing LRU precisely in an OS is expensive, so practical implementations often use an approximation called .

○ MRU

○ MFU

○ LFU

● NRU

#12 Points possible: 3

The second-chance (clock) algorithm is an efficient approximation technique for _______.

● LRU page replacement

○ LFU page replacement

○ benchmarking file system performance

○ benchmarking raw disk I/O performance

#13 Points possible: 3

Which of the following memory management is not suitable for a multi-programming environment?

● single contiguous memory allocation

○ fix-sized partitions allocation

○ variable-sized partitions allocation

○ segmentation with paging

#14 Points possible: 3

Suppose that the TLB has a 90% hit ratio, if the times for TLB searching is 20 nanoseconds, access memory is 100 nanoseconds, what is the effective emory-access time?

○ 120 nanoseconds

● 130 nanoseconds

○ 140 nanoseconds

○ 220 nanoseconds

#15 Points possible: 3

_________ may have not internal fragmentation.

○ Paging memory management

● Segmentation memory management

○ Fix-sized partition memory management

○ Segmentation with paging memory management

#16 Points possible: 3

Which of the following page replacement algorithms may produce Belady’s anomaly?

● FIFO

○ LRU

○ OPT

○ None of the above

#17 Points possible: 3

The fundamental basis for virtual memory management is _____ .

○ virtuality

● locality

○ globality

○ dynamics

#18 Points possible: 3

To fetch a data from main memory in a demand paging system requires ______ accesses to the physical memory.

○ 1

● 2

○ 3

○ 4

#19 Points possible: 3

With demand paging, __________ have worst system performance.

○ stacks

○ lists

● hash tables

○ arrays

#20 Points possible: 3

In a demanding paging system, the size of a page is 4KB. A process access the logical address 12345 (0x3039) will _____ if the page table is as the following:

Page #	Frame #	Validity
0	3	V
1	4	V
2	2	V
3	—	I

○ access physical address 4*4096+57

○ access physical address 3*4096+57

○ access physical address 2*4096+57

● cause a page-fault interrupt

#21 Points possible: 2

为使虚存系统有效地发挥其预期的作用，所运行的程序应具有的特性是—。

○ 该程序不应含有过多的I/O操作

○ 该程序的大小不应超过实际的内存容量

● 该程序应具有较好的局部性（Locality）

○ 该程序的指令相关不应过多

#22 Points possible: 2

总体上说，请求分页(demand-paging)是个很好的虚拟内存管理策略。但是，有些程序设计技术并不适合于这种环境。例如，________。

○ 堆栈

○ 线性搜索

○ 矢量运算

● 二分法搜索

#23 Points possible: 2

考虑页面置换算法，系统有m个页帧供调度，初始时全空；引用串长度为p，包含了n个不同的页面，无论用什么缺页算法，缺页次数不会少于______。

- ○ m
- ○ p
- ● n
- ○ min(m,n)

#24 Points possible: 2

首次适应算法的空闲区是____。

- ● 按地址递增顺序连在一起
- ○ 始端指针表指向最大空闲区
- ○ 按大小递增顺序连在一起
- ○ 寻找从最大空闲区开始

#25 Points possible: 2

下述____页淘汰算法会产生Belady现象。

- ● 先进先出
- ○ 最近最少使用
- ○ 最不经常使用
- ○ 最佳页面置换

#26 Points possible: 2

在虚拟分页存储管理系统中，若进程访问的页面不在主存，且主存中没有可用的空闲帧时，系统正确的处理顺序为 ______ 。

- ○ 决定淘汰页→页面调出→缺页中断→页面调入
- ○ 决定淘汰页→页面调入→缺页中断→页面调出
- ● 缺页中断→决定淘汰页→页面调出→页面调入
- ○ 缺页中断→决定淘汰页→页面调入→页面调出
