OS Common Quiz 2 (21April2018)

Name: _____ **Roll No.:** _____

Q1: Consider a disk pack with 16 surfaces, 128 tracks per surface and 256 sectors per track. The number of bits required to specify a particular sector in the disk is 19

Q2: The swap space resides on the hard-disk / disk

Q3: The memory allocation policy that allocates the largest hole to a process is worst-fit

Q4: The directory implementation used in most Operating Systems is tree structure

Q5: Rotational latency is the time required by a sector to reach below read/write head

Q6: Consider a logical address space of eight pages of 1024 words each, mapped onto a physical memory of 32 frames, the number of bits in the physical address is 15

Q7: Relative pathname begins in the current directory and follows a path down to the specified file.

Q8: A solution to the problem of external fragmentation is compaction

Q9: Allocation of frames to processes according to their size is called proportional allocation

Q10: A disk partition that contains a file system is called volume

Q11: Determine number of page faults when references to pages occur in following order: 1, 2, 4, 5, 2, 1, 2, 4. Assume that the main memory can accommodate 3 pages and the main memory already has the pages 1 and 2, with page 1 having been brought earlier than page 2. (LRU algorithm is used)

A) 3 B) 5 C) 4 D) None of these

Q12: Which of the following is not a solution to thrashing?

A) Running fewer processes B) Increasing the speed of the CPU

C. Increasing the size of physical memory D. Rewriting programs to have better locality

Q13: In a paged memory, the page hit ratio is 0.35. The time required to access a page in secondary memory is equal to 100 ns. The time required to access a page in primary memory is 10 ns. The average time required to access a page is

A) 3.0 ns B) 68.0 ns C) 68.5 ns D) 78.5 ns

14: Which of the following statements is false?

A) Segmentation suffers from external fragmentation. B) Paging suffers from internal fragmentation.

C) Segmented memory can be paged. D) Virtual memory is used only in multi-user systems.

Q15: A memory page containing a heavily used variable that was initialized very early and is in constant use is removed, then the page replacement algorithm used is:

A) LRU B) Second Chance C) FIFO D) none of the above

Q16: Assuming that the disk head is located initially at 32, find the number of disk moves required with FCFS if the disk queue of I/O block requests are 98, 37, 14, 124, 65, 67 :

A) 310 B) 324 C) 320 D) 321

Q17: When a program tries to access a page that is mapped in address space but not loaded in physical memory, then

A) segmentation fault occurs B) fatal error occurs C) page fault occurs D) no error occurs

Q18: If there are 32 segments, each of size 1KB, then the logical address should have :

A) 13 bits B) 14 bits C) 15 bits D) 16 bits

Q19: A process refers to 5 pages, A, B, C, D, E in the order : A, B, C, D, A, B, E, A, B, C, D, E. If the page replacement algorithm is FIFO, the number of page transfers with an empty internal store of 3 frames is :

A) 8 B) 10 C) 9 D) 7

Q20: When a process begins execution with no pages in memory :

A) process execution becomes impossible B) a page fault occurs for every page brought into memory

C) process causes system crash D) none of the mentioned