Date: January 21, 2012

Operating Systems Concepts (60 Minutes)

1. The computer itself uses _____ language.
   1. High level
   2. Natural
   3. Assembly
   4. Machine
2. Which of the following is not an operating system?
   1. SuSE
   2. Unix
   3. OSD
   4. DOS
3. Object modules generated by assemblers may contain unresolved references. These are resolved using other object modules by the _____.
   1. linker
   2. loader
   3. debugger
   4. compiler
4. Which of the following is not a necessary condition for a deadlock?
   1. Mutual Exclusion
   2. Circular wait
   3. No preemption of resources
   4. None of the above
5. An operating system is _____.
   1. Integrated software
   2. CD-ROM software
   3. System software
   4. Application software
6. Match the operating system abstractions in the left column to the hardware components in the right column

a. Thread	1. Interrupt
b. Virtual Address Space	2. Memory
c. File System	3. CPU
d. Signal	4. Disk

   1. a-2, b-4, c-3, d-1
   2. a-3, b-2, c-4, d-1
   3. a-1, b-2, c-3, d-4
   4. a-4, b-2, c-2, d-1
7. Which of the following file streams is not opened automatically in a UNIX program?
   1. Standard terminal
   2. Standard input
   3. Standard output
   4. Standard error
8. Transfer of information to and from main memory takes place in terms of _____.
   1. Bytes
   2. Words
   3. Bits
   4. Nibbles
9. Virtual Memory _____.
   1. is an extremely large main memory
   2. is an extremely large secondary memory
   3. is a type of memory used in supercomputers
   4. allows execution of processes that may not be completely in memory
10. Page fault occurs when _____.
    1. The page is corrupted by application software
    2. The page is in main memory
    3. The page is not in main memory
    4. One tries to divide a number by 0
11. An operating system with multiprogramming capability is one that_____.
    1. allows several users to use the same program at once by giving each a slice of time
    2. loads several independent processes into memory and switches the CPU from one job to another as required
    3. runs programs over more than one processor
    4. None of the above
12. Where does swap space reside?
    1. Disk
    2. RAM
    3. ROM
    4. On-chip cache
13. A 1000 MB hard disk has 512-byte sectors. Each track on the disk has 1000 sectors. The number of tracks on the disk is _____.
    1. 1024
    2. 2048
    3. 512
    4. 1000
14. Which of the following is not an advantage provided by shared libraries?
    1. They save disk space
    2. They save space in main memory
    3. Multiple versions of the same library can be loaded into main memory
    4. None of the above
15. Spooling is _____.
    1. The rewinding of tapes after processing
    2. The temporary storage and management of output to printers and other output devices until they can cope with it
    3. The recording of all user activities in a log file
    4. None of the above
16. One function of an operating system is to handle interrupts. Interrupts are_____.
    1. a delay in processing due to operating system overload
    2. messages received from other computers
    3. signals from hardware or software requesting attention from the operating system
    4. None of the above
17. Which of the following is not a solution for the critical section problem?
    1. Monitor
    2. Semaphore
    3. Critical Region construct
    4. Segmentation
18. System calls are invoked by using _____.
    1. Software interrupt
    2. Polling
    3. Indirect jump
    4. A privileged instruction

19. Paging is the transfer of pages between main memory and the _____.
    1. Kernel
    2. Computer system
    3. Auxiliary store
    4. Output device
20. Which of the following commands is used to count the total number of lines, words and characters contained in a file?
    1. count p
    2. wc
    3. wcount
    4. countw
21. The size of the virtual memory depends on the size of the _____.
    1. Address bus
    2. Data bus
    3. Memory bus
    4. None of the above
22. Computers use the _____ language to process data.
    1. Processing
    2. kilobyte
    3. Binary
    4. Representational
23. What do you mean by computer interrupt?
    1. When a device has data to transfer it makes an interrupt. that means it needs your attention, the processor then stops what it is doing and deals with the device
    2. The computer is interrupted by a signal from space saying it needs to close down the illegal application
    3. when on word processor, if you type to much the computer makes an interrupt to let you there is no more room to type
    4. When someone tries to add to your conversation
24. Multiprogramming systems_____.
    1. Are easier to develop than single programming systems
    2. Execute each job faster
    3. Execute more jobs in the same time period
    4. Are used only one large mainframe computers
25. The components that take data are located in the _____.
    1. Input devices
    2. output devices
    3. system unit
    4. storage component
26. What is one of the advantages of Paging?
    1. It does not suffer from internal fragmentation
    2. It does not suffer from spooling
    3. It does not suffer from external fragmentation
    4. All of the above
27. The heart of any computer is processing the input in order to provide useful _____.
    1. Information
    2. Output
    3. Kernel
    4. Communication
28. Which of the following memory management schemes does not allow multiprogramming?
    1. Fixed partition
    2. Dynamic partition
    3. Single-user contiguous scheme
    4. Relocatable dynamic partitions
29. Which of the following is the correct way of calculating the address of the page frame?
    1. Multiply the page frame number by the page frame size
    2. Divide the page frame size by the page frame number
    3. Add the page frame number and the page frame size
    4. Multiply the page frame number by the displacement
30. Which of the following concept is best at preventing page faults?
    1. Paging
    2. Hit ratios
    3. The working set
    4. Address location resolution
31. The total effect of all CPU cycles, from both I/O-bound and CPU-bound jobs, approximates which of the following distribution curves?
    1. Gaussian distribution
    2. Poisson distribution
    3. Lorentzian Distribution
    4. Random Distribution
32. Which of the following storage allocation scheme results in the problem of fragmentation?
    1. Contiguous storage
    2. Non-contiguous storage
    3. Indexed storage
    4. Direct storage
33. Which of the following commands in UNIX gives the user the capability of executing one program from another program?
    1. nice
    2. fork
    3. exexv
    4. nohup
34. What does a cycle in a wait-for graph indicate?
    1. Deadlock
    2. Preemptive
    3. Non-Preemptive
    4. None of the above
35. What kind of CPU burst an I/O-bound program would typically have?
    1. Long
    2. Short
    3. Average
    4. All of the above
36. UNIX uses the _____ page replacement algorithm.
    1. LRU
    2. MRU
    3. FCFS
    4. FIFO
37. The _____ command will display the absolute pathname for the directory that you are working in.
    1. dir
    2. pwd
    3. ls
    4. whereami

38. Which command would you use to create a sub-directory in your home directory?
    1. mkdir
    2. dir
    3. cp
    4. rm
39. Round-robin scheduling is _____.
    1. Non- preemptive
    2. It depends
    3. Preemptive
    4. None of the above
40. Which command can be used to display the contents of a file on the screen?
    1. ls
    2. cat
    3. dog
    4. grep
41. What is the Process Input Queue?
    1. A collection of processes
    2. A collection of processes on the disk that have already executed
    3. A collection of processes on the disk that are waiting to be brought into memory for execution
    4. Both 1 and 2
42. What is Swapping?
    1. The process of moving a process within memory to and from the backing store
    2. The process of moving a process within memory to backing store
    3. The process of moving a process to memory
    4. All of the above
43. Using the SJF algorithm, which process is allocated the CPU first?
    1. The process that requests the CPU first
    2. The process that requests the CPU last
    3. The process with the smallest CPU execution time
    4. None of the above
44. Which of the following is not a scheduling algorithm?
    1. First-Come First-Serve
    2. Round Bear
    3. Shortest Job First
    4. None of the above
45. Which process is allocated the CPU first in FCFS algorithm?
    1. The process that requests the CPU first
    2. The process that requests the CPU last
    3. Processes are allocated the CPU randomly
    4. None of the above
46. What will be the order when information is processed with direct access?
    1. Any order
    2. Sequential order
    3. Non-sequential order
    4. None of the above
47. What will be the order when information is processed with sequential access?
    1. Any order
    2. Sequential order
    3. Non-sequential order
    4. None of the above
48. Cache memory refers to _____.
    1. cheap memory that can be plugged into the mother board to expand main memory
    2. fast memory present on the processor chip that is used to store recently accessed data
    3. a reserved portion of main memory used to save important data
    4. a special area of memory on the chip that is used to save frequently used constants
49. A memory management technique used to improve computer performance is_____.
    1. Selecting memory chips based on their cost
    2. Storing as much data as possible on disk
    3. Using the cache to store data that will most likely be needed soon
    4. Preventing data from being moved from the cache to primary memory
50. What do you mean by defragmentation?
    1. keyboard that allows for a more natural positioning of your arms and hands.
    2. The time it takes to read/write head to move to a specific data track; one of the delays associated with reading or writing data on a computer disk drive.
    3. Pointing device you can use instead of a mouse. These devices sense the position of your finger and then move the pointer accordingly.
    4. A utility that reduces the amount of fragmentation by physically organizing the contents of the disk to store the pieces of each file contiguously.