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Operating Systems Concepts (60 Minutes)

1. Which one is not a system call?
   1. execl
   2. execve
   3. fork
   4. All of the above
2. Binary Semaphores are used for _____.
   1. resource allocation
   2. critical sections
   3. mutual exclusion
   4. synchronization
3. What dispatcher does?
   1. Select the process from the ready queue
   2. Run the process from the ready queue
   3. Select and run the process from the ready queue
   4. None of the above
4. Which one is the correct statement regarding thread?
   1. Logical extension of the process.
   2. Very similar to the process.
   3. Threads have there own address space they do not use the process address space.
   4. Threads share the same address space that is used by the process
5. Which system call will you use to get the parent of the process?
   1. getp()
   2. getppid()
   3. getparentid()
   4. None of the above
6. What is process control block?
   1. It is data structure that represents the process.
   2. It is a data structure, which is part of the user space, and it represents the process.
   3. It is a data structure, which is part of the kernel space, and it represents the process.
   4. It is not a data structure which can be in virtual address space it represent the process.
7. Which one is not a part of the kernel?
   1. Memory management
   2. Debuggers management
   3. Interrupt management
   4. Timer and clock management
8. What is the kernel architecture for Linux?
   1. Micro kernel
   2. Macro kernel
   3. Monolithic kernel
   4. Hybrid kernel
9. Normally, when a hardware interrupt occur.
   1. mode switch and context-saving occur.
   2. context-switch and context-saving occur.
   3. Both 1 and 2
   4. None of the above
10. What type of file system Linux is using?
    1. FAT –32
    2. NTFS
    3. LFS
    4. Ext3
11. During process execution, which state transaction, is not possible?
    1. Ready state to running state
    2. Running state to block state
    3. Block state to terminate state
    4. Block state to ready state
12. _____ signal generate when we try to access the illegal memory location using invalid pointer.
    1. SIGSTOP
    2. SIGSEGV
    3. SIGTERM
    4. SIGNULL
13. What will be the possibility, when process comes in wait or block state?
    1. disk operation
    2. time slice expire
    3. due to the higher priority process arrival
    4. All of the above
14. What is the fundamental scheduling block for operating system?
    1. Kernel Thread
    2. Process Control Block (PCB)
    3. Light Weight Process (LWP)
    4. User Thread
15. Which command can be use on Linux platform to shutdown the system?
    1. shutdown –r now
    2. shutdown
    3. init 0
    4. init 6
16. What is attenuation?
    1. Noise on the cable
    2. Loss of signal strength
    3. Unwanted signals
    4. None of the above
17. Which Inter Process Communication mechanism is fastest to exchange the data between processes?
    1. PIPE
    2. FIFO
    3. Shared Memory
    4. Message Queue
18. Bootstrap loader is _____.
    1. A program, which resides in the user space.
    2. A program, which resides in ROM.
    3. A program, which resides in the RAM.
    4. A program, which is a module of the kernel space.
19. The page table entry contains _____.
    1. the information regarding given page is valid or not.
    2. the information regarding given segment is valid or not.
    3. the information regarding given page table is valid or not.
    4. All of the above
20. POSIX pthread library implementation in Linux schedules _____
    1. user threads without the help of the kernel.
    2. user threads with the help of light weight process.
    3. user threads with the help of the kernel.
    4. user threads with the help of heavy weight process.

21. How many processes can be active in a monitor at a time?
    1. Any no of processes
    2. Only one
    3. Only two
    4. None of the above
22. Segmentation leads to _____.
    1. External Fragmentation
    2. Internal Fragmentation
    3. Both 1 and 2
    4. All of the above
23. What is the fundamental scheduling block for operating system?
    1. Kernel Thread
    2. Light Weight Process (LWP)
    3. Process Control Block (PCB)
    4. User Thread
24. In static priority based scheduling _____.
    1. Priorities are decided at the time of the design and not changed during execution.
    2. Priorities are decided at the time of design and may be changed during execution by APIs.
    3. Priorities are decided by the scheduler during execution.
    4. All of the above
25. Paging leads to _____.
    1. Internal Fragmentation
    2. External Fragmentation
    3. Both 1 and 2
    4. All of the above
26. User space and Kernel space are defined by:
    1. Kernel
    2. Hardware-CPU
    3. Both 1 and 2
    4. Administrator
27. Conventional RTOS uses _____
    1. only kernel space.
    2. only user space.
    3. may be user space and kernel space.
    4. None of the above
28. With any Disk Scheduling Algorithms, Performance depends on _____.
    1. Number of requests
    2. Number and types of requests
    3. Types of requests
    4. None of the above
29. What happens when a page fault occur for a valid legal virtual address?
    1. Process will terminate
    2. Process will block
    3. The process will restart after the page is brought to the main memory and page table entry will update.
    4. None of the above
30. What happens when a page fault occur for an invalid_illegal virtual address?
    1. Process will terminate
    2. Process will block
    3. The process will restart after the page is brought to the main memory and page table entry will update.
    4. All of the above
31. What ping command does?
    1. It sends ICMP ECHO_REQUEST to network hosts.
    2. It sends ICMP ECHO_REQUEST to network servers only.
    3. It sends ICMP non ECHO_REQUEST to network host.
    4. It sends ICMP non ECHO_REQUEST to network servers only.
32. What linker does?
    1. merging object files
    2. sorting text and data
    3. resolve symbols across modules
    4. All of the above
33. How can we find out the free space size to use on Linux system hard disk partition?
    1. df -hs
    2. freedisk -hs
    3. fdisk -hs
    4. None of the above
34. How can we get the information about the CPU on the Linux system?
    1. cat /usr/cpuinfo
    2. cat /proc/cpuinfo
    3. cat /root/proc/cpuinfo
    4. cat /root/usr/cpuinfo
35. Where the main system message log file information get stored?
    1. /var/log/message
    2. /usr/log/message
    3. /src/log/message
    4. /root/log/message
36. Which is the Linux kernel image file from the following and what is location in the file system?
    1. kimage and location is /boot
    2. kernelimage and location is /usr
    3. vmliunz and location is /boot
    4. kimage and location is /usr
37. By using interrupt which kind of problem will be eliminated?
    1. Spooling
    2. Polling.
    3. Job scheduling
    4. None of the above
38. Virtual memory with paging mechanism (page-replacement technique) provides.
    1. runtime relocatability
    2. memory extension
    3. memory protection
    4. All of the above
39. inode number represents _____.
    1. the directory on the file system uniquely.
    2. all types of files on the file system uniquely.
    3. all process running on the system.
    4. use of the inode in the file system.
40. Which statement is true?
    1. Cache memory is type of the nonvolatile memory
    2. RAM stands for reliable access memory
    3. Cache resides between main memory and CPU
    4. Hard disk is made up of different layer of the RAM

41. Loader is use to _____.
    1. load the kernel from harddisk to main memory.
    2. load the appropriate program into the main memory.
    3. create the process and load in to the main memory.
    4. just make the program ready to load and loading in to memory is done by another process.
42. Which statement is true for the deadlock?
    1. It is very usual, when a process terminates, it became dead process and this leads to dead lock
    2. Deadlock arises when a process try to access a non shareable resources.
    3. Deadlock arises when process is holding some resources and it wants some more resources that are already hold by some other process and no one want to release their resources.
    4. Deadlock arises when we try to lock the process and the process is in running state that lock become a dead lock.
43. Which one is default shell for the Linux?
    1. csh
    2. tcsh
    3. ksh
    4. bash
44. Which statement is true?
    1. Process is a passive entity.
    2. We cannot divide process in further threads.
    3. Process is an active instance of the program.
    4. Threads do not use the memory space provided by the process.
45. Which CPU scheduling algorithm is non-preemptive type from the following?
    1. Shortest job first scheduling.
    2. Round robin scheduling.
    3. Priority based scheduling.
    4. First come first serve based scheduling.
46. Which statement is true from the following?
    1. A safe state is a deadlock state always.
    2. An unsafe state is a deadlock state always.
    3. An unsafe state has a probability to be a deadlock state.
    4. All are true.
47. copy-on-write concept is _____.
    1. applicable only for two unrelated processes.
    2. used by the processes those created with the help of exec call.
    3. used by the any kind of process no restriction.
    4. used by the related processes.
48. Which register is use for memory management?
    1. base register
    2. bound register and stack pointer
    3. base and bound register
    4. base and stack pointer register
49. What is the use of the program counter register?
    1. It points to the next program in the execution.
    2. It points to the next instruction statement in the program.
    3. It points to the next block of code in the execution.
    4. None of the above
50. What are the resources for the computer system?
    1. CPU cycles.
    2. System buses.
    3. Operating system code and data structure.
    4. All of the above