Operating Systems Concepts

1. Which CPU scheduling algorithm is the Preemptive scheduling?
   1. First Come First serve (FCFS)
   2. Round Robin (RR)
   3. Both
   4. None of the above.
2. Which CPU scheduling algorithm may suffer from the Starvation Problem
   1. Round Robin (RR)
   2. First Come First serve (FCFS)
   3. Priority scheduling
   4. None of the above.
3. A Multithreaded programming Benefits
   1. Increase Responsiveness to user.
   2. Utilization of multiprocessor architecture.
   3. Resource Sharing
   4. All of above
4. Circular waiting is
   1. not a necessary condition for deadlock
   2. a necessary condition for deadlock, but not a sufficient condition.
   3. a sufficient condition
   4. None of the above.
5. In an operating system using paging , if each 32-bit address is viewed as a 20-bit page identifier plus a 12-bit offset, what is the size of each page?
   1. 2^12 =4096 bytes
   2. 2^20 bytes
   3. 20 byte
   4. None of the above.
6. Advantage of memory management using virtual memory
   1. More Process can be loaded in the momery, to try to keep the processor busy
   2. A process whose image larger than memory can be executed
   3. Both 1 & 2
   4. None of the above.
7. Following is not a Disk scheduling algorithm:
   1. First Come First serve (FCFS)
   2. Round Robin
   3. SCAN
   4. LOOK
8. Which of the following condition is necessary for the deadlock
   1. Mutual exclusion and Hold-and-wait
   2. No preemption and circular wait
   3. Both 1 & 2
   4. None of the above.
9. LOOK disk scheduling algorithm:
   1. Select the request with minimum seek time from current head position.
   2. Moves the head from one end of the disk to other end, servicing request along the way.
   3. Moves the head only as far as the final request in each direction, then it reverse direction immediately, without first going all the way to the end of the disk.
   4. None of the above.
10. Thrashing is:
    1. CPU scheduling algorithm
    2. disk-scheduling algorithm
    3. High Paging Activity
    4. None of the above.
11. Spooling
    1. In spooling, a process writes its output to a temporary file rather than to an output device, such as a printer
    2. In spooling, a process writes its output to an output device, such as a printer
    3. Both 1 & 2
    4. None of the above.
12. A "critical section" of code is
    1. A section that is executed very often, and therefore should be written to run very efficiently.
    2. A section of the program that must not be interrupted by the scheduler.
    3. A section of the program that is susceptible to race conditions, unless mutual exclusion is enforced.
    4. A section of the code executed in kernel mode
13. The OS uses a round robin scheduler. The FIFO queue of ready processes holds three processes A, B, C in that order. The time quantum is 18 msec. A context switch takes 2 msec. After running for 13 msec, B will block to do a disk read, which will take 30 msec to complete. Trace what will happen over the first 100 msec. What is the CPU efficiency over the first 100 msec?
    1. 80%
    2. 70%
    3. 90%
    4. 100%
14. "Time Quantum" in Round Robin Scheduling algorithm:
    1. Time between the submission and completion of a process.
    2. Time for the disk arm to move to the desired cylinder
    3. Maximum time a process may run before being preempted
    4. Time required to switch from one running process to another
15. An OS uses a paging system with 1Kbyte pages. A given process uses a virtual address space of 128K and is assigned 16K of physical memory. How many entries does its page table contain?
    1. 1024
    2. 128
    3. 512
    4. 64
16. What is the "turnaround time" in scheduling algorithms?
    1. Time for a user to get a reaction to his/her input.
    2. Time between the submission and completion of a process
    3. Time required to switch from one running process to another
    4. Delay between the time that a process blocks and the time that it unblocks

17. "chmod " command in Linux
    1. Change the operating system mode
    2. Change the command mode
    3. Change Access mode of file
    4. None of the above.
18. "grep" Command is used
    1. make each column in a document in a separate file
    2. combine a file and write them into a temp file
    3. search a file for lines containing a given format.
    4. None of the above.
19. A program which is loaded into memory & is executing is commonly referred to as a:
    1. Software.
    2. Job.
    3. Process.
    4. Program
20. Bankers Algorithm is used for:
    1. Deadlock Characterization
    2. Deadlock Handling
    3. Deadlock avoidance
    4. Deadlock Detection
21. To enable a process to be larger than amount of memory allocated, we use:
    1. TLB.
    2. Fragmentation.
    3. Overlays.
    4. None of the above.
22. A _____ is a memory area that stores data while they are transferred between 2 devices:
    1. Spool
    2. Buffer
    3. Cache
    4. Kernel
23. The command used to display long listing of file is:
    1. ls –l
    2. ls –a
    3. ls –t
    4. ls –r
24. The _____ file stores information about file systems that are mountable during booting:
    1. /lib
    2. /mnt
    3. /etc/fstab
    4. /usr/local
25. In Linux ____ command is used to change the current working directory & ____ command is used to print the current working directory on the screen:
    1. cd, pwd
    2. pwd, cd
    3. cd, cp
    4. cp, cd
26. _____ Is a special user who has ultimate privilege on Linux system:
    1. Any user
    2. Super user
    3. Administrator
    4. None of the above
27. In Linux, we can display the content of text file by using the command:
    1. display
    2. show
    3. cat
    4. All of the above
28. Which command is used to change the group of a file?
    1. change group
    2. chgrp
    3. changep
    4. None of the above
29. If more than one process is blocked, the swapper chooses a process with the _____
    1. Lowest Priority.
    2. Highest Priority.
    3. Medium priority
    4. No Priority.
30. In Batch processing system the memory allocator are also called as _____
    1. Long – term scheduler
    2. Short – term scheduler
    3. Medium – term scheduler
    4. Batch – term scheduler.
31. Wait until the desired sector of a disk comes under the R/W head as the disk rotates. This time is called as _____
    1. seek time
    2. latency time
    3. transmission time
    4. Read/Write time
32. All other processes wanting to enter their respective critical regions are kept waiting in a queue called as _____.
    1. Ready queue.
    2. Waiting queue
    3. Semaphore queue.
    4. Critical queue.
33. There would be some time lost in turning attention from process 1 to process 2 is called as _____
    1. Process transferring.
    2. Process switching
    3. Process turning.
    4. Context switching
34. Some operating system follows the technique of _____ in which you skip two sector and then number the sector (eg After starting from 0,you skip two sector and then number the sector as 1 and so on...)
    1. Leaving.
    2. Skipping.
    3. Interleaving.
    4. Jumping
35. An alternative to the scheme of DMA is called _____.
    1. Programmed I/O.
    2. Mapped I/O.
    3. I/O Mapped I/o
    4. I/O Controller
36. The kernel has to keep track of all the pages frames in terms of whether they are free, and if not, the process to which they are allocated. This is done by maintaining another data structure called _____.
    1. Page Map Table (PMT).
    2. Page Frame Data Table (PFDT).
    3. Page Table Entry (PTE).
    4. Disk Block Descriptor (DBD).

37. _____ processes tend to be faster, since they do not have to go to the kernel for every rescheduling (Context switching).
    1. heavyweight processes.
    2. Lightweight processes.
    3. Kernel processes.
    4. System processes
38. To know the name of the Shell program we use following command (Bourne Shell).
    1. $0
    2. $1
    3. $2
    4. $9
39. To hold the exit status of the previous command _____ command is used.
    1. $$
    2. $?
    3. $/
    4. $
40. To know the Process id of the current process _____ command is used.
    1. $$
    2. $?
    3. $/
    4. $
41. To know the path of the Shell ____ command is used.
    1. PATH
    2. CDPATH
    3. SHELL
    4. PS1
42. To print a file in Linux which command is used
    1. print
    2. ls –p
    3. lpr
    4. None
43. To create an additional link to an existing file, which command is used
    1. ln
    2. sbln
    3. cp
    4. none
44. The Linux command "cp ch? book"
    1. Copies all files starting with ch to the directory book
    2. Copies all files with three-character names and starting with ch to the directory book
    3. Compress whether a file starting with ch exists in the directory book
    4. None of the above
45. Command used in shell to read a line of data from terminals
    1. rline
    2. line
    3. lread
    4. None of these
46. In vi, to change a word in command mode, one has to type
    1. cw
    2. wc
    3. lw
    4. none
47. What would be the output of the following shell script?

```
foo=10
x=foo
eval y='$'$x
echo $y
```

    1. foo
    2. 10
    3. x
    4. $x
48. In the following shell script

```
echo "Enter password"
read pas
while [ "$pas" != "secrete" ]; do
    echo "Sorry, try again"
    read pas
done
exit 0
```

    1. If the 'pas' matches with 'secrete' in /etc/passwd file then shell script exits.
    2. The shell script gives error in while statement
    3. Irrespective of the users input, it always prints "Sorry, try again"
    4. If user enters secrete then shell script exits otherwise it will read pas once again
49. The output of the following shell script would be:

```
for var in DAC August 2005
do
    echo $var
    echo " C-DAC "
done
```

    1. DAC August 2005
    2. C-DAC C-DAC C-DAC
    3. DAC C-DAC August C-DAC 2005 C-DAC
    4. DAC C-DAC
50.

```
fun(){
echo "enter a number"
read num
num=$(($num+1))
echo "$num"
}

fun
exit 0
```

The above shell script
    1. takes a number from user, increments it, and prints to the terminal.
    2. prints "num" to terminal
    3. gives error in the line fun (function call), because it should be written as fun()
    4. exits without doing anything