Mock OSC

1. One problem with the global page replacement algorithm is:

   A. It is very expensive
   B. Many frames can be allocated to a process
   C. Only a few frames can be allocated to a process
   D. Fault rate – a process cannot control its own page

2. What must reside in the main memory under all situations in a resident - OS computer?

   A. Linker
   B. Loader
   C. Assembler
   D. Compiler

3. Which of the following statements is true for the dirty page in a page table?

   A. Helps to maintain LRU information
   B. Allows only read on a page
   C. Helps to avoid unnecessary writes on paging device
   D. None of the above

4. A filename is modified using the command "mv filea fileb", where fileb already exists. In this scenario, which of the following is true?

   A. fileb's inode number is changed to filea's inode number
   B. fileb's inode number does not change, remains the same the old fileb
   C. The inode entry for fileb is not affected by this command
   D. None of the above

5. A user executes the following command successfully:
       $ chmod +x file1.txt
   Which of the following is true about the output of this command?

   A. The command results in adding execute permission to the user who ran this command
   B. The command results in adding execute permission for the owner of the file
   C. The command results in an error since the file is not an executable file
   D. The command results in adding execute permission for all users

6. Which command is used to display all the files including hidden files in your current directory and subdirectories?

    A. ls -a
    B. ls -aR
    C. ls -R
    D. ls -l

7. Which of the tar command options is used to list the files in a tape archive format?

    A. cvf
    B. tvf
    C. xvf
    D. lvf

8. The command syntax to display the file 'sample.txt' one page at a time is:

    A. cat sample.txt > more
    B. cat sample.txt < more
    C. cat sample.txt | more
    D. man sample.txt | more

9. How many links are created when we create a directory?

    A. 1
    B. 2
    C. 3
    D. 4

10. A user issues the following command sequence:

```
$ a.out &
$ bash
$ a.out &
```

If the user kills the bash process, then which of the following is true?

- **A.** The second a.out process is also terminated
- **B.** The second a.out process becomes a defunct process
- **C.** The first a.out process becomes a zombie process
- **D.** init process becomes parent of second a.out process

11. If the below script named 'test' is invoked with 5 arguments, what is the output?

```
echo $#
shift
echo $#
```

- **A.** 5 4
- **B.** 5 5
- **C.** 4 4
- **D.** 5 and script error in line 3

12. Which one of the following is not a valid shell variable?

- **A.** _san
- **B.** san_2
- **C.** _san_2
- **D.** 2_san

13. The kill system call is used to:

- **A.** Send shutdown messages to all by superuser
- **B.** Send a signal to a process
- **C.** Kill processes
- **D.** Stop the processes

14. Find / -name '*' will:

    A. List all files and directories recursively starting from /
    B. List a file named * in /
    C. List all files in / directory
    D. List all files and directories in / directory

15. Deadlock prevention is a set of methods to:

    A. ensure that at least one of the necessary conditions cannot hold
    B. ensure that all of the necessary conditions do not hold
    C. decide if the requested resources for a process have to be given or not
    D. recover from a deadlock

16. The segment of code in which the process may change common variables, update tables and write into files is known as:

    A. Program
    B. critical section
    C. non – critical section
    D. synchronizing

17. The first process launched by the Linux kernel is:

    A. init process
    B. zombie process
    C. batch process
    D. boot process

18. The maximum number of frames per process is defined by:

    A. the amount of available physical memory
    B. operating System
    C. instruction set architecture
    D. none of the mentioned

19. Each _____ has its own index block.

    A. Partition

    B. Address

    C. File

    D. page

20. A thread shares its resources (like data section, code section, open files, signals) with:

    A. other process similar to the one that the thread belongs to.

    B. other threads that belong to similar processes

    C. other threads that belong to the same process

    D. all of the above

21. Which of the following is not True?

    A. Processes may send each other signals

    B. Kernel may send signals internally

    C. A field is updated in the signal table when the signal is sent

    D. Each signal is maintained by a single bit

22. Which of the following is used for storing the number of positional parameters?

    A. $n

    B. $#

    C. $*

    D. $?

23. Which of the following commands let us perform a set of instructions repeatedly?

    A. For

    B. While

    C. Until

    D. for, while, until

24. Under what circumstances would a user be better off using a timesharing system rather than a PC or single-user workstation?

    A. switch between jobs
    B. uniprogramming systems
    C. multiprogramming systems
    D. crontab

25. If any user wants to access the services of operating system, which of the following interface options is correct?

    A. API
    B. assembly information
    C. library
    D. system calls

26. Which file checks the user login validation / authentication?

    A. /etc/shadow
    B. /etc/password
    C. /etc/profile
    D. ~/.profile

27. Unnamed pipes are used for communication between:

    A. two computers
    B. two related processes
    C. two unrelated processes
    D. two networks

28. Which of the following system calls will create the new process for any program?

    A. create ( )
    B. fork ( )
    C. open ( )
    D. thread ( )

29. What does the following command display?

    ps –aux

    A. Displays detailed information of processes currently running, of all users
    B. Displays detailed information of processes currently running, of current user
    C. Displays detailed information of processes and daemons currently running, of all users
    D. Displays detailed information of processes and daemons currently running, of current user

30. Which of the following loader is executed when a system is first turned on or restarted?

    A. Boot loader
    B. Compile and Go loader
    C. Bootstrap loader
    D. Relating loader

31. To avoid race condition, the maximum number of processes that may be simultaneously inside the critical section is:

    A. Zero
    B. One
    C. Two
    D. more than two

32. Which of the following conditions is required for deadlock to be possible?

    A. mutual exclusion
    B. process may hold allocated resources while awaiting assignment of other resources
    C. no resource can be forcibly removed from a process holding it
    D. All of the above

33. SV IPC objects are _____.

    A. objects on the file system
    B. destroyed automatically when the program completes execution
    C. persistent objects
    D. non persistent objects

34. RAM resident System V IPC mechanisms in Linux provides _____ method of communication.

   A. UNIX Socket
   B. FIFO
   C. Shared memory
   D. virtual memory

35. Which of the following operators is used to break the case statement in shell script?

   A. ;
   B. ;;
   C. *)
   D. break

36. Which of the following commands is used to delete the history from system?

   A. history -d
   B. history -s
   C. history -r
   D. history -c

37. Which command is used to debug a shell script program?

   A. set d
   B. debug
   C. set
   D. set -x

38. Which command is used to display only hidden files?

   A. ls –d .*
   B. ls -a
   C. ls .*
   D. ls

39. Thrashing can be avoided if:

   A. The pages, belonging to the working set of the programs, are in main memory
   B. The speed of CPU is increased
   C. The speed of I/O processor are increased
   D. All of the above

40. In the many to one model, multiple threads are unable to run in parallel on multiprocessor because:

   A. many user threads have access to just one kernel thread
   B. There is only one kernel thread
   C. There are many kernel threads
   D. only one thread can access the kernel at a time