1. Pre-emptive scheduling, is the strategy of temporarily suspending a running process

1. before the CPU time slice expires
2. to allow starving processes to run
3. when it requests I/O)
4. none of the above

2. Mutual exclusion problem occurs

1. between two disjoint processes that do not interact
2. among processes that share resources
3. among processes that do not use the same resource
4. none of the above

3. Sector interleaving in disks is done by

1. the disk manufacturer
2. the disk controller cord
3. the operating system
4. none of the above

4. Memory protection is of no use in a

1. single user system
2. non-multiprogramming system
3. non-multitasking system
4. none of the above

5. Some computer systems support dual mode operation—the user mode and the supervisor or

monitor mode. These refer to the modes

1. by which user programs handle their data
2. by which the operating system executes user programs
3. in which the processor and the associated hardware operate.
4. of memory access

6. Disk scheduling involves deciding

1. which disk should be accessed next
2. the order in which disk access requests must be serviced
3. the physical location where files should be accessed in the disk
4. none of the above

7. A computer system has 6 tape drives, with 'n' processes competing for them. Each process may

need 3 drives. The maximum value of 'n' for which the system is guaranteed to be deadlock free

is

1. 2
2. 3
3. 4
4. 1

8. Dirty bit is used to show the

1. page with corrupted data
2. wrong page in the memory
3. page that is modified after being loaded into cache memory
4. page that is less frequently accessed

9. Fence register is used for

1. CPU protection
2. memory protection
3. file protection
4. all of the above

10. Which of the following.is a service not supported by the operating system?

1. Protection
2. Accounting
3. Compilation
4. I/O operation

11. Operating system is a ....

1. System software
2. Application software
3. Presentation software
4. Database software

12. The OS used to operate the mobile phone is a

1. Smart card OS
2. Embedded OS
3. Multiuser OS
4. None of above

13. Linux Operating System is an

1. Multi User Operating System
2. Time Sharing Operating System
3. Multi Tasking Operating System
4. All the Above

14. Which of the following is the allocation method of a disk space?

1. Contiguous allocation
2. Linked allocation
3. Indexed allocation
4. All of the Above

15. A program in execution is called

1. A Paging
2. A Process
3. A virtual memory
4. A Demand Page

16. A \_\_\_\_\_\_\_\_\_\_\_\_\_is a collection of processors that do not share memory, peripheral devices, or a clock.

1. Computer system
2. distributed system
3. network
4. None of the above

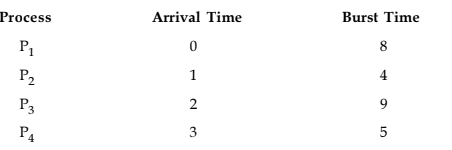
17. Routine is not loaded until it is called. All routines are kept on disk in a relocatable load format. The main program is loaded into memory & is executed. This type of loading is called \_\_\_\_\_\_\_\_\_

1. Static loading
2. Dynamic loading
3. Dynamic linking
4. Overlays

18. Which of the following is crucial time while accessing data on the disk?

1. Seek time
2. Rotational time
3. Transmission time
4. Waiting time
5. Which of the following memory allocation scheme suffers from External fragmentation?
6. Segmentation
7. Pure demand paging
8. Swapping
9. Paging
10. Information about a process is maintained in a \_\_\_\_\_\_\_\_\_.
11. Stack
12. Translation Lookaside Buffer
13. Process Control Block
14. Program Control Block
15. The time taken by the disk arm to locate the specific address of a sector for getting information is called \_\_\_\_\_\_\_\_\_\_.
16. Rotational Latency
17. Seek Time
18. Search Time
19. Response Time
20. Which of the following is not advantage of multiprogramming?
21. Increased throughput
22. Shorter response time
23. Decreased operating system overhead
24. Ability to assign priorities to jobs
25. An optimal scheduling algorithm in terms of minimizing the average waiting time of a given set of processes is \_\_\_\_\_\_\_\_.
26. FCFS scheduling algorithm
27. Round robin scheduling algorithm
28. Shorest job - first scheduling algorithm
29. None of the above
30. Which technique was introduced because a single job could not keep both the CPU and the I/O devices busy?
31. Time-sharing
32. SPOOLing
33. Preemptive scheduling
34. Multiprogramming
35. Inter process communication can be done through \_\_\_\_\_\_\_\_\_\_.
36. Mails
37. Messages
38. System calls
39. Traps
40. In Priority Scheduling a priority number (integer) is associated with each process. The CPU is allocated to the process with the highest priority (smallest integer = highest priority). The problem of, Starvation? low priority processes may never execute, is resolved by \_\_\_\_\_\_\_\_\_\_.
41. Terminating the process.
42. Aging
43. Mutual Exclusion
44. Semaphore
45. CPU performance is measured through \_\_\_\_\_\_\_\_.
46. Throughput
47. MHz
48. Flaps
49. None of the above
50. Kernel mode of Operating system runs when the mode bit is
51. 1
52. 0
53. Null
54. Undefined
55. Which system call returns the process identifier of a terminated child?
56. Wait
57. Exit
58. Fork
59. get
60. The address of the next instruction to be executed by the current process is provided by the
61. CPU registers
62. Program counter
63. Process stack
64. Pipe
65. Which module gives control of the CPU to the process selected by the short-term scheduler?
66. Dispatcher
67. Interrupt
68. Scheduler
69. none of the mentioned
70. The processes that are residing in main memory and are ready and waiting to execute are kept on a list called
71. job queue
72. ready queue
73. execution queue
74. process queue
75. The interval from the time of submission of a process to the time of completion is termed as
76. waiting time
77. turnaround time
78. response time
79. throughput
80. Which scheduling algorithm allocates the CPU first to the process that requests the CPU first?
81. first-come, first-served scheduling
82. shortest job scheduling
83. priority scheduling
84. none of the mentioned
85. In priority scheduling algorithm
86. CPU is allocated to the process with highest priority
87. CPU is allocated to the process with lowest priority
88. Equal priority processes can not be scheduled
89. None of the mentioned
90. In priority scheduling algorithm, when a process arrives at the ready queue, its priority is compared with the priority of
91. all process
92. currently running process
93. parent process
94. init process
95. Time quantum is defined in
96. shortest job scheduling algorithm
97. round robin scheduling algorithm
98. priority scheduling algorithm
99. multilevel queue scheduling algorithm
100. Process are classified into different groups in
     1. shortest job scheduling algorithm
     2. round robin scheduling algorithm
     3. priority scheduling algorithm
     4. multilevel queue scheduling algorithm
101. In multilevel feedback scheduling algorithm
102. a process can move to a different classified ready queue
103. classification of ready queue is permanent
104. processes are not classified into groups
105. none of the mentioned
106. Which of the following condition is required for deadlock to be possible?
107. mutual exclusion
108. a process may hold allocated resources while awaiting assignment of other resources
109. no resource can be forcibly removed from a process holding it
110. all of the mentioned
111. A system is in the safe state if
112. the system can allocate resources to each process in some order and still avoid a deadlock
113. there exist a safe sequence
114. all of the mentioned
115. none of the mentioned
116. A process stack does not contain
117. Function parameters
118. Local variables
119. Return addresses
120. PID of child process

43. Consider the following four processes with the arrival time and length of CPU burst given in milliseconds :

  
The average waiting time for preemptive SJF scheduling algorithm is \_\_\_\_\_\_\_\_\_\_.

1. 6.5
2. 7.5
3. 6.75
4. 7.75

44. In a multi-user operating system, 30 requests are made to use a particular resource per hour, on an average. The probability that no requests are made in 40 minutes, when arrival pattern is a poisson distribution, is \_\_\_\_\_\_\_\_\_.

1. e-15
2. 1 – e-15
3. 1 – e-20
4. e-20
5. A system has n resources R0,…,Rn-1,and k processes P0,….Pk-1.The implementation of the resource request logic of each process Piis as follows:

if (i % 2 == 0) {

if (i < n) request Ri

if (i+2 < n) request Ri+2

}

else {

if (i < n) request Rn-i

if (i+2 < n) request Rn-i-2

}

In which one of the following situations is a deadlock possible?

1. n=40, k=26
2. n=21, k=12
3. n=20, k=10
4. n=41, k=19

46**.** Which of the following is NOT true of deadlock prevention and deadlock avoidance schemes?

1. In deadlock prevention, the request for resources is always granted if the resulting state is safe
2. In deadlock avoidance, the request for resources is always granted if the result state is safe
3. Deadlock avoidance is less restrictive than deadlock prevention
4. Deadlock avoidance requires knowledge of resource requirements a priori
5. A system contains three programs and each requires three tape units for its operation. The minimum number of tape units which the system must have such that deadlocks never arise is \_\_\_\_\_\_\_\_\_.
6. 6
7. 7
8. 8
9. 9
10. A system contains three programs and each requires three tape units for its operation. The minimum number of tape units which the system must have such that deadlocks never arise is \_\_\_\_\_\_\_\_\_.
11. 6
12. 7
13. 8
14. 9
15. Which of the following is NOT a valid deadlock prevention scheme?
16. Release all resources before requesting a new resource
17. Number the resources uniquely and never request a lower numbered resource than the last one requested.
18. Never request a resource after releasing any resource
19. Request and all required resources be allocated before execution.
20. **Consider three processes (process id 0, 1, 2 respectively) with compute time bursts 2, 4 and 8 time units. All processes arrive at time zero. Consider the longest remaining time first (LRTF) scheduling algorithm. In LRTF ties are broken by giving priority to the process with the lowest process id. The average turn around time is:**  
    a. 13 units  
    b. 14 units  
    c. 15 units  
    d. 16 units

51. What is the output of the following command for bash shell:

echo linux $0

1. linux echo
2. linux linux
3. linux bash
4. linux

52. What would be the current working directory at the end of the following command sequence?

$ pwd

/home/user1/proj

$ cd src

$ cd generic

$ cd .

$ pwd

* + 1. /home/user1/proj
    2. /home/user1/proj/src
    3. /home/user1
    4. /home/user1/proj/src/generic

53. How do you print the lines between 5 and 10, both inclusive

* + 1. cat filename | head | tail -6
    2. cat filename | head | tail -5
    3. cat filename | tail +5 | head
    4. cat filename | tail -5 | head -10

54. Create a new file “new.txt” that is a concatenation of “file1.txt” and “file2.txt”

* + 1. cp file.txt file2.txt new.txt
    2. cat file1.txt file2.txt > new.txt
    3. mv file[12].txt new.txt
    4. ls file1.txt file2.txt | new.txt

55. Which command will be used with vi editor to replace text from cursor to right?

* + 1. r
    2. R
    3. s
    4. S

56. What is the output of the following code:

os=Linux

echo 1.$os 2."$os" 3.'$os' 4.$os

* + 1. 1.Linux 2.Linux 3.Linux 4.Linux
    2. 1.Linux 2.Linux 3.$os 4.Linux
    3. 1.Linux 2.Linux 3.Linux 4.$os
    4. 1.Linux 2.$os 3.$os 4.$os

57. What is the output of the following program?

x = 3; y = 5; z = 10;

if [( $x -eq 3 ) -a ( $y -eq 5 -o $z -eq 10 )]

then

echo $x

else

echo $y

fi

* + 1. 1
    2. 3
    3. 5
    4. Error

58. What is the output of the following program?

[ -n $HOME ]

echo $?

[ -z $HOME ]

echo $?

a. 0 1

b. 1 0

c. 0 0

d 1 1

59. What is the output of the following program?

b =

[ -n $b ]

echo $?

[ -z $b ]

echo $?

1. 1 1
2. 2 2
3. 0 0
4. 0 1

60. The expression expr -11 % 2 evaluates to:

* + 1. 0
    2. 1
    3. -1
    4. 2

61. Which of the following commands can be used to change default permissions for files and directories at the time of creation?

* 1. chmod
  2. chown
  3. umask
  4. chgrp

62. Which of the following options when used with tar command displays the list of files in a tape archive format?

* 1. cvf
  2. tvf
  3. xvf
  4. ovf

63. Which of the following command displays the current date in the format dd/mm/yyyy?

* 1. date +%d/%m/%Y
  2. date +”%d/%m/%Y”
  3. date +/%d/%m/20%y
  4. date +”/%d/%m/20%y”

64. Maximum how long can a Linux filename be?

* 1. 128 bytes
  2. 255 bytes
  3. 32 bytes
  4. 64 bytes

65. If 7 terminals are currently logged on, then the command

date ; who|wc-l displays

1. Date followed by 7
2. Date followed by 8
3. Date followed by 1
4. an error message

66. Which combination of keys is used to exit from terminal?

* 1. Ctrl + t
  2. Ctrl + z
  3. Ctrl + d
  4. Ctrl + e

67. Which command(s) is/are used to get help about a command in Linux?

* 1. whatis
  2. man
  3. None of these
  4. Both a and b

68. Which command is used to list all the files in your current directory(including hidden)?

* 1. ls -l
  2. ls -t
  3. ls -a
  4. ls -i

69. Which of the following command is used to create file in Linux?

* 1. touch
  2. cat
  3. echo
  4. All of the above

70. In Linux everything stored as a

* 1. file
  2. directory
  3. executables
  4. None of the above

71. Which of the following is not a valid login shell in Linux?

* 1. C shell
  2. Net Shell
  3. Bash Shell
  4. Z shell

72. Which command is used to record session in Linux?

* 1. script
  2. session
  3. both a and b
  4. none of these

73. Which of the following command can be used as an alternative to echo command?

* 1. print
  2. printr
  3. printf
  4. none of these

74. Which command is used to change password of your Linux system?

* 1. password
  2. pass
  3. change -p
  4. passwd

75. Which command is used see the list of users who are currently logged-in?

* 1. login
  2. users
  3. who
  4. which

76. Which directory in Linux contains all the config file of the system?

* 1. /etc
  2. /var
  3. /lib
  4. /bin

77. Which of the following command is used to know last shutdown/reboot date and time?

* 1. last
  2. lastlogin
  3. lastreboot
  4. lastshutdown

78. Which of the following statement is incorrect about /bin and /sbin directory?

* 1. /sbin contain only binaries essential for booting, restoring, Recovering, and/or repairing the system in addition to the binaries in /bin.
  2. There is no difference between /bin and /sbin, they are just two directories
  3. /bin contains commands that may be used by both the system administrator and by users, but which are required when no other filesystems are mounted.
  4. Utilities used for system administration are stored in /sbin.

79. Which of the following command(s) is/are used to reboot a Linux system?

* 1. shutdown -h
  2. reboot
  3. init 6
  4. All of the above

80. Total no of run levels in a Linux system?

* 1. 6
  2. 7
  3. 5
  4. 8

81. Which command is used to copy entire directory?

* 1. cp -r
  2. cp -i
  3. cp
  4. none of these

82. Which special character should be avoided during naming a file?

* 1. .(dot)
  2. $
  3. \_(underscore)
  4. -(Hyphen)

83. Suppose I am in /etc directoy, after executing cd .(single dot), where am I now?

* 1. /etc
  2. /(root)
  3. /home
  4. None of these

84. mv command can be used to ?

* 1. Move the file to different directory.
  2. Renaming a file
  3. Both a and b.
  4. Only a.

85. What is the process id of init process?

* 1. 2
  2. 6
  3. 4
  4. 1

86. Which command is used to show process hierarchy in tree format?

* 1. ps -tree
  2. pstree
  3. ps -t
  4. none of these

87. Which of the following command is used to see the content of tar(backup.tar) file without extracting it?

* 1. tar -xvf backup.tar
  2. tar -svf backup.tar
  3. tar -tvf backup.tar
  4. none of these

88. What is the purpose of id command?

* 1. Print effective and real UID
  2. Print effective and real GID
  3. Print effective and real UID and GID
  4. None of these

89. Which command is used to print the login shell of an user?

* 1. echo $SHELL
  2. echo $LOGIN
  3. echo $LSHELL
  4. None of the Above

90. Which of the following command return the exit status of last command?

* 1. $!
  2. $$
  3. $?
  4. $#

91. which command is used to print the current working direcotry?

* 1. pwd
  2. echo $PWD
  3. Both A and B
  4. Only A

92. Maximum number of processes exist in Linux system ?

* 1. 32768
  2. 1024
  3. 2048
  4. 16384

93. Which of the following command keep a process running even after you logout from your shell?

* 1. &
  2. nohup
  3. bg
  4. hup

94. What is the range of nice number in linux system?

* 1. 0 to 19
  2. -20 to 19
  3. -20 to 0
  4. -10 to 10

95. On success fork return \_\_\_\_\_\_ to parent process?

* 1. 0
  2. 1
  3. parent process id
  4. child process Id

96. Which of the following command kill all the process including shell ?

* 1. kill kill 0
  2. kill -9 kill 0
  3. kill -s kill 0
  4. Both B and C

97. Which of the following statement is true ?

* 1. echo $$ return PID of login shell and echo $? return status of last command
  2. echo $$ return status of last command and echo $? return PID of login shell
  3. echo $$ and echo $? return some integer value of no significance
  4. All of the statements are false

98. Priority of the process can be changed using which of the following command ?

* 1. nice
  2. chpriority
  3. renice
  4. Not allowed to change process priority

99.Which of the following commands is used to update access and modification times of a file?

* + 1. grep
    2. wc
    3. touch
    4. cat

100.Which of the following commands is used to obtain a list of all files by modification time?

* + 1. ls -1
    2. ls -t
    3. ls -i
    4. ls –r