CS604 Operating System
Grand Quiz Spring 2021
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OBJECTIVE

1. In Unix/Linux by default the standard input file is attached to the _____
   - **Keyboard**
2. In which of the following system multiple user are allowed to used the computer simultaneously?
   - **Multi user**
3. In the layered approach of the Operating System _____
   - Bottom Layer(N) is the hardware
4. Which is not basic computing hardware?
   - **Compact Disc**
5. A heavy weight process _____
   - **Has a single thread of execution**
6. Processes P1,P2,P3,P4 enter the ready queue at the time 0,3,3,11 with burst P1=8, P2=2,P3=1, P4=1. With Shortest Remaining Time First,_____ process is given CPU at time T=3.
   - **P3**
7. _____ is a solution to the problem of indefinite blockage of low –priority process.
   - **Aging**
8. The child process can_____
   - Be duplicate of the parent process
9. FIFO's (also known as named pipes) are used for communication between _____ on UNIX/LINUX System.
   - **Unrelated Processes**
10. _____ Command is used to change the directory.
    - **cd**
11. In UNIX/LINUX environment, Ayesha wants to know the complete picture of current processes in her session. Which of the following command will help her in this regard
    - **$top**
12. Which of the following conditions must be satisfied to solve the critical section problem?

- Mutual Exclusion
- Progress
- Bounded Waiting
- All of the mentioned

13. The _____ process crates two FIFOs, and FIFO2, and opens FIFO1 for reading and FIFo2 for writing.

- **Server**

14. Ali is an operating system designer. One user requirement regarding OS is easy to debug and modify. In your opinion which one of the following OS structure Ali needs to follow?

- **Layered approach**

15. _____ is not a system call Linux.

- **Read**

16. Use of semaphore crates a problem of busy waiting. This wastes CPU cycle that some other process may be able to use productively. This type of semaphore is also called_____

- **Spinlock**

17. Both in two atomic instructions TestAndSet and swap two critical section requirements are satisfied but not _____

- **Mutual Exclusion**

18. _____ are used to show executions of processes.

- **Gant charts**

19. Kernel is responsible for scheduling the user level threads.

- **True**

20. _____ scheduling can be made into processor sharing approach.

- **Round Robin**

21. _____ scheduling allows a process to move between queues.

- **Multilevel Feedback Queue**

22. To prevent a process from keeping CPU for too long. Control is shifted to another ready process by invoking a timer.

- **When running process makes a system call**

23. Which of the following two operations are provided by the IPC facility?

- **Receive & Send message**

24. Access of variable Semaphore is possible only through two atomic operation _____ and _____

- **TestAndSet,Swap**

25. _____ Multi-threading model provides full concurrency.

- **Many-to- Many**

26. The main characteristic of Real time system is

- **Large secondary storage device**

27. Kill command is used to terminate a process. The syntax of the command is kill[-signal] PID When executed without a signal number.
    - **SIGTERM**
28. Given below two statements can be categorized in some sort message passing techniques. This type is named as _____
    - **Direct communication**
29. OS helps manages the following except
    - **Bus speed of the system**
30. Cooperating processes never share any data, code memory or state.
    - **False**
31. In instruction TestAndSet mutual exclusion implementation is done by declaring a Boolean variable lock_____
    - **Initialized as false**
32. ____ command display the status of process.
    - **Ps**
33. When a process executes and manipulates shared data then the process is state of ___
    - **Critical section**
34. The problem with priority scheduling algorithm is _____
    - **Aging**
35. Both in two atomic instructions TestAndSet and swap two critical section requirements are satisfied but not _____
    - **Progress**
36. Shortest remaining time first scheduling algorithm is referred to as shortest job first scheduling algorithm.
    - **True**
37. An operating system is easily portable between varying hardware in _____ structural approach.
    - **Virtual machines**
38. Using hardware solution to synchronization for complex problems, introduce a new synchronization tool know as _____
    - **Semaphore**
39. The _____ system cal suspends the calling process until one of the immediate children terminate.
    - **Wait**
40. _____ command display the contents of current working directory.
    - **Is**
41. The situation in which no context is required in multiprocessor system is referred to as _____
    - **Scheduler**

42. Round Robin algorithm is similar to __ scheduling but preemption is added to switch between processes.
    - **First Come First Serve**
43. Unix System V scheduling uses queues, which run_____ algorithm.
    - **Round Robin**
44. In Bakery algorithm, processes are prioritized based on highest Ticket number among competing process.
    - **True**
45. FIFO's (also known named pipes) are used for communication between _____ on UNIX/ Linux system.
    - **Unrelated Processes**
46. A __ enables a user process to request the operating system to execute a privileged instruction for it.
    - **System call**
47. You can use the bg command to put the current or a suspended process into the background. What is the correct syntax of bg command from the following _____
    - **bg[%job_id]**
48. Which one of the following statement is not true regarding the Cooperating processes?
    - **It may affect or be affected by any other process executing in the system**
49. We can terminate a thread explicitly by either returning from the thread function or by using the _____ call.
    - **pthread_exit()**
50. Which of the following is used to show the end of file in UNIX?
    - **CTRL+D**
51. Linux uses _____ directory to store system configuration files.
    - **/etc**
52. A process 'A' that has finished working but its parent process has also finished its execution. In this state the process 'A' will be called as ___ process.
    - **Zombie**
53. When a process has undivided access to a share piece of code then no other process can execute this code, this state is called
    - **Mutual exclusion**
54. The kernel is a computer program that manages _____ requests from software
    - **Input/output**
55. _____ is used in real time operating system
    - **Preemptive scheduling**

56. A thread shares its resources (like data section, code section, open files, signals) with _____
    - **Other threads that belong to the same processes**
57. OS helps manages the following except
    - **Bus speed of the system**
58. _____ is a piece of code in a cooperating process in which the process may update shared data (variable, file, database etc)
    - **Critical section**
59. A program execution is called a _____
    - **Process**
60. The _____ define an operating system as a bridge between computer user and hardware for a user's convenience.
    - **Top-down view**
61. The section of code before the critical section is called _____
    - **Entry section**
62. This layered is taken to its logical conclusion in the concept of a _____
    - **Virtual machine**
63. Which of the following provide interface to access the services of the operating system?
    - **System call**
64. In operating system, _____ command is used to copy files to same location or different location.
    - **Both copy and CP**
65. Keep in mind scheduling algorithm ,when you go to any famous fast food franchise .On entering the store ,each customer receives a number. The customer with the lowest number is served next. This algorithm is called…..
    - **Bakery algorithm**
66. When a process P1 switches from the running state to the waiting state because an I/O request is being completed. This scheduling is called ……
    - **Non preemptive**
67. The ready queue in RR(Round Robin) scheduling algorithm is referred to as _____
    - **Circular Queue**
68. CPU bound processes are scheduled before short or I/O bound processes in ____ scheduling, therefore, resulting in less CPU and device utilization.
    - **First come First serve**
69. Using _____ system, we can create a new process in Linux
    - **Fork**
70. A shell command makfifo can be used to create a /an
    - **Named pipe**

71. Which of the following statement is not true regarding the Cooperating process____
    - **It may affect or be affected by any other process executing in the system**
72. In round-robin (RR) scheduling algorithm the CPU scheduler goes around _____time quantum.
    - **1**
73. P1, P2,P3,P4,P5,P5 are five processes with ticket number P1=1 ,P2=2 ,_____ process enters critical section after P1.
    - **P2**
74. After fork() system call is made, parent and child process their separate __
    - **File descriptions**
75. A major problem with priority-scheduling algorithm is ___
    - **Starvation**
76. The __ system cal suspends the calling process until one of
    - **Wait**
77. The priority of a process can be changed using _ command.
    - **Nice**
78. In multilevel queue-scheduling algorithm the highest priority is given to____
    - **System processes**
79. Given below two statements can be categorized in some sort message
    - Send(A, message)
    - Receive(B, message)
    - Direct communication
80. To display all processes __ option is used with ps command.
    - **-e**
81. The BSD sockets are used for communication between related or unrelated _____ different systems.
    - **Unrelated processes**
82. In hardware multiprocessor environment two instruction are executed ____
    - **Atomically**
83. rmkdir command is used to ____ an empty directory.
    - **Remove**
84. The file descriptor for Standard Input(stdin) is _____
    - **0**
85. UNIX System V Scheduling Algorithm in every second. The priority number ready to run is updated by using the following formula
    - **Priority#= Threshold Priority+nice**
86. Which part of the computer system helps in managing the file and memory
    - **Operating system**

87. The write() system call may not fail for _____ reasons(s)
.
- **Valid argument**

88. Which of the following is not a True for a time-sharing system?
- **CPU sit idle when a process requires I/O operation**

89. _____ process or threads often need access to shared data in
- **Concurrent**

90. Four processes P1,P2,P3,P4 enter the ready queue at time 0 with burst till
- **12**

91. In _ addressing, the recipient is not required to name the sender.
- **Asymmetric**

92. Concurrent processes must be synchronized to prevent_____
- **Race condition**

93. POSIX is a standard developed by _____
- **IEEE**

94. In process management, some of the jobs can be suspended for some time in order to give other jobs a chance to be execution. Which command can be used to place back a suspended program?
- **fg**

95. processes P1,P2,P3,P4 enters the ready queue at time 0,3,3,3,11 with burst time P1=8,P2=2,P3=1,P4=1. With Shortest remaining Time First._____ process is given CPU at a time T=3.
- **P3**

96. While using the read/write system call which data type is use to return the size of file to buffer from file descriptor fd?
- **Ssize_t**

97. For reading input, which of the following system call is used?
- **read**

98. A solution to the critical section problem must satisfy the following requirements except
- **Race condition**

99. ~symbol in the pathname~/docs/cs604/handouts represents _____
- **Login Directory**

100. .
Which is not a parameter of pthread_create().
- **Return status**

101. .
Preemptive SJF(Shorted Job First) scheduling is sometimes called__ scheduling.
- **Shortest remaining-time-first**

102. .

_____ is used to request the OS by the process to take an I/O or initiating child process.

- **System call**

103. .

The nice value helps in assigning _____ to a process.

- **Priority**