When process opens its first file explicitly it will get descriptor number _____

Choices:

2
standard file descriptors.
Standard input: 0 (keyboard)
Standard output: 1 (display screen)
Standard error: 2 (display screen)
page 52

3
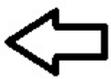
1

4

Using _____ system call, we can create a new process in Unix.

Choices:

- ◉ fork

- ○ exec

- ○ wait

- ○ exit

Which one is not the state of the process?

Choices:

○ Waiting

○ Running

◉ Privileged

○ New

To avoid the race condition, the number of processes that may be simultaneously inside
their critical section is

Choices:

○ 8

● 1

○ 16

○ 0

_____ loads, verifies, and executes programs that have been translated into Java byte code.

....

Choices:

○ Java Virtual Machine

○ VMWare

○ VM Solution

○ VM PC

A time interval when a process uses CPU only is called _____.

Choices:

○ Scheduling

○ I/O burst

◉ CPU burst

○ Dispatch latency

Round robin scheduling usually increases the average waiting time so its performance heavily depends upon _____.

Choices:

- No. of processes

- Time quantum

- Switching

- No. of queues

TIME LEFT
18

Due to which of the following reason, a parent may terminate the execution of one of its children.

Choices:

○ Use more resources than allocated

○ Busy other than assigned task

○ Start abnormal behavior

○ Many jobs in a system

Question: 9 (Marks: 1)   Attempted Questions: **22**   Total Questio

Which of the following tool is used for inter process communication between related or unrelated processes on the same system or unrelated processes on different system over the network?

Choices:

○ Pipe

○ BSD socket   ⟵

👈 Named pipe (FIFO)

○ Message Queue

TIME LEFT

The files which are automatically opened by the kernel for every process to read its input from and send its output and error messages are called_____.

Choices:

File identifiers

Standard File descriptors

File descriptors

Standard files

In Unix/Linux client server process communication, server process runs in the background by terminating its command line with --------------.

Choices:

- ⦿ &

- ○ @

- ○ %

- ○ $

Each thread has its own --------------.

Choices:

Process ID (PID)

Address Space

Thread ID (TID)

Open file descriptors

Preemptive scheme of Short job first scheduling is known as ------- .

Choices:

○ First Come First Serve Scheduling

◉ Shortest-Remaining-Time-First

○ Priority Scheduling

○ Round-Robin Scheduling

A process terminates by calling the ----------system call.

Choices:

○ wait

○ fork

◉ exec

○ exit

The ------------system call is used to open or create a file.

Choices:

○ open()

○ read()

○ write()

○ close()

TIME LEFT

The syntax for input redirection is

Choices:

command < input-file

command > input-file

command >= input-file

command =< input-file

The syntax for output redirection is

Choices:

command < output-file

command >= output-file

command > output-file

command =< output-file

Operating Systems (CS604)

Question: 18   (Marks: 1)   **Attempted Questions: 22   Total Questions:**

_____ algorithm is the optimal scheduling algorithm among all the non-preemptive scheduling algorithms.

Choices:

○ Shortest Job First scheduling

○ First Come First Serve

○ Priority Scheduling

○ Round Robin Scheduling

Process synchronization is a process of helping processes to _____

Choices:

○ update the shared data simultaneously

○ update the shared data and resources in an orderly fashion

○ not to update the shared data or memory

○ access data and memory at first come first serve basis

Question: **20** **(Marks: 1)**   **Attempted Questions:** **23** **Total Questions:** **26**

A parent process calling _____ system call will be suspended until any imediate child terminates.

Choices:

wait

fork

exit

exec

Question: **21** (Marks: 2)

Write the code to create a thread, take thread ID in thread named as newThread and run Mythread function.

A CPU scheduler has different evaluation matrices and average waiting time is one of them. State how **Waiting time** relates to the evaluation of matrices with respect to CPU Scheduling?

Question: **23** (Marks: 3)

The mknod() system call may fail due to different reasons. You are required to identify at least three failure scenarios in which mknod() system call fails to execute.

....

Answer:

Some of the scenarios are :
When the file with given name is exists

Question: **24** **(Marks: 3)**

What will happen if exit () is called instead of pthread_exit () in multithreaded system?

....

Answer:

A A B I U
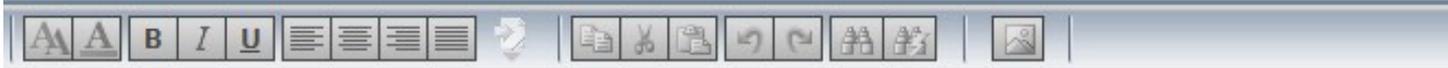
Operating Systems (CS604)

Question: 25   (Marks: 5)

While processing a job it is possible that each process is executed and managed independently but sometimes it gives overhead to OS. Highlight the issues that can come across while managing a process independently and how the threads can help to overcome these issues? Write at least three aspects used by thread to overcome these issues.

Operating Systems (CS604)

Question: 26   (Marks: 5)

Consider performance of FCFS algorithm for three computer-bound processes. If process P1 takes 24 seconds, P2 takes 3 seconds and P3 takes 3 seconds and processes arrive in the given order P1, P2, P3. You need to calculate the following:

    a) Turnaround Time per process.
    b) Average Turnaround time of processes