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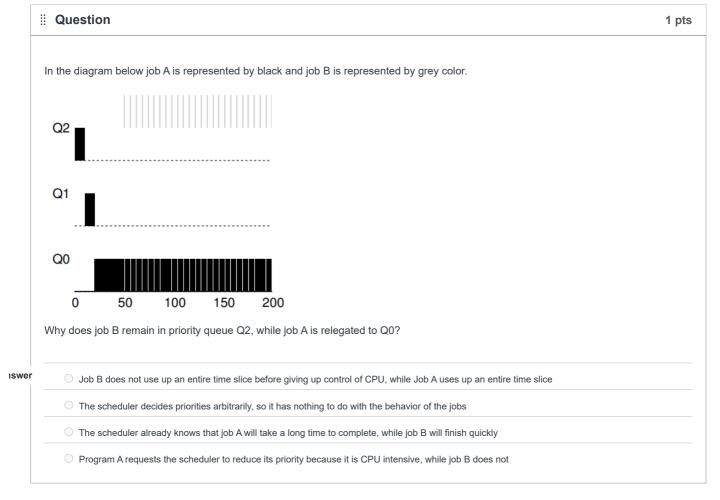Points 8   ✅ **Published**   ⋮

Details   **Questions**

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⋮⋮ Question   **1 pts**

Which of the following is NOT a function of the kernel mode in a processor?

swer

○ Running application programs.

○ Accessing and managing system resources, such as memory, CPU time, and I/O devices.

○ Providing system services to user-mode programs, such as file I/O and networking.

○ Scheduling and executing processes.

⋮⋮ Question   **1 pts**

"Limited Direct Execution" is the idea that we run a program directly on the processor to ensure execution at full speed. But we "limit" this direct execution. What are the limitations that we impose on the program?

swer

○ the program does not have unrestricted access to system resources

○ only a limited portion of the program is loaded in the processor

○ only a fraction of program data is loaded into the processor

○ on a limited address space is allocated to the program in the main memory

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⋮⋮ Question   **1 pts**

A job is queued for processing at t=9ms. Its execution began at t=12ms. And it got completed at t=22ms. Then:

swer

○ turnaround time = 13ms, response time = 3ms

○ turnaround time = 10ms, response time = 3ms

○ turnaround time = 3ms, response time = 10ms

○ turnaround time = 3ms, response time = 13ms

⋮⋮ Question   **1 pts**

Suppose in an STCF scheduler, the queue is initially empty. Then:

Job A arrives at t=0 and is 100ms long.

Job B arrives at t=90ms and is 8ms long.

Job C arrives at t=94ms and is 5ms long.

The order of completion of these jobs is:

nswer
- ○ B completes first, then C, then A

- ○ A completes first, then B, then C

- ○ B completes first, then A, then C

- ○ A completes first, then C, then B

- ○ C completes first, then B, then A

- ○ C completes first, then A, then B

Question   1 pts

Which statement about RR and STCF schedulers is true?

nswer
- ○ STCF optimizes turnaround time, RR optimizes response time

- ○ STCF optimizes response time, RR optimizes turnaround time

- ○ STCF and RR both optimize response time

- ○ STCF and RR both optimize turnaround time

Question   1 pts

In the diagram below job A is represented by black and job B is represented by grey color.

Why does job B remain in priority queue Q2, while job A is relegated to Q0?

nswer
- ○ Job B does not use up an entire time slice before giving up control of CPU, while Job A uses up an entire time slice

- ○ The scheduler decides priorities arbitrarily, so it has nothing to do with the behavior of the jobs

- ○ The scheduler already knows that job A will take a long time to complete, while job B will finish quickly

- ○ Program A requests the scheduler to reduce its priority because it is CPU intensive, while job B does not

⠿ **Question**   **1 pts**

Suppose you wrote a program for a mini-shell. How do you execute a program from the shell and return back to the prompt after execution is complete?

iswer
- ○ Use fork() to create a child process, use exec() in child process to run the program, and use wait() in parent for the child to finish
- ○ Use exec() to create a child process, use fork() in child process to run the program, and use wait() in parent for the child to finish
- ○ Use fork() to create a child process, use exec() in parent process to run the program, and use wait() in child for the child to finish
- ○ Use exec() to create a child process, use fork() in parent process to run the program, and use wait() in child for the child to finish

⠿ **Question**   **1 pts**

✎ ✕

For output redirection to a file the following code can be used:

```
close(STDOUT_FILENO);
open(filename, O_CREAT | O_WRONLY | O_TRUNC, S_IRWXU);
```

Which of the following statements is NOT true.

iswer
- ○ There are special flags open() system call that tell the OS to make this filename as the new STDOUT
- ○ Closing STDOUT_FILENO releases the file-descriptor to be used by other files
- ○ The file opened by the open() command assigns the file-descriptor STDOUT_FILENO to the newly opened file
- ○ All system calls used for printing data to the console use STDOUT_FILENO file-descriptor by default

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