

Ceng 328 - Quiz 2

Solve all questions.

For Tuesday section

1. (1.5 pts) A process control block -----
 - A) includes information on the process's state
 - B) stores the address of the next instruction to be processed by a different process
 - C) determines which process is to be executed next
 - D) is an example of a process queue
2. (1.5 pts) The list of processes waiting for a particular I/O device is called a(n) -----
 - A) standby queue
 - B) device queue
 - C) ready queue
 - D) interrupt queue
3. (1.5 pts) When a child process is created, which of the following is a possibility in terms of the execution or address space of the child process?
 - A) The child process runs concurrently with the parent.
 - B) The child process has a new program loaded into it.
 - C) The child is a duplicate of the parent.
 - D) All of the above
4. (1.5 pts) A process may transition to the Ready state by which of the following actions?
 - A) Completion of an I/O event
 - B) Awaiting its turn on the CPU
 - C) Newly-admitted process
 - D) All of the above

5. (4.5 pts) Name and describe the different states that a process can exist in at any given time.
6. (4.5 pts) Ordinarily the *exec()* system call follows the *fork()*. Explain what would happen if a programmer were to inadvertently place the call to *exec()* before the call to *fork()*.

For Friday section

1. (1.5 pts) The _____ of a process contains temporary data such as function parameters, return addresses, and local variables.
 - A) text section
 - B) data section
 - C) program counter
 - D) stack
2. (1.5 pts) The _____ refers to the number of processes in memory.
 - A) process count
 - B) long-term scheduler
 - C) degree of multiprogramming
 - D) CPU scheduler
3. (1.5 pts) Which of the following statements is true?
 - A) Shared memory is typically faster than message passing.
 - B) Message passing is typically faster than shared memory.
 - C) Message passing is most useful for exchanging large amounts of data.
 - D) Shared memory is far more common in operating systems than message passing.
4. (1.5 pts) A process may transition to the Ready state by which of the following actions?
 - A) Completion of an I/O event
 - B) Awaiting its turn on the CPU
 - C) Newly-admitted process
 - D) All of the above

5. (4.5 pts) Explain the main differences between a short-term and long-term scheduler.
6. (4.5 pts) Explain the difference between an I/O-bound process and a CPU-bound process.