Advanced Unix programming – Quiz2

Time limit: 12 minutes

1. (1 point) Where is information about a file, such as the locations of the blocks, actually stored:

   (a) File descriptor.
   (b) i-node.
   (c) Open file description.
   (d) File table.

   B

2. (2 point) Write a short piece of code that redirects standard input from a file called "*in.file*", using *open* and *close*. (You may wish to use the following flags: $STDIN\_FILENO$, and O_RDONLY.)

```
close(STDIN_FILNO);
open(‘‘in.file’’, O_RDONLY);
```

3. (1 point) Assume that standard input is redirected from a file called: "*in.file*", while standard output remains the terminal. Which of the following buffering would meet ANSI C requirements:

   (a) Standard input is fully buffered, while standard output is line buffered.
   (b) Standard input is line buffered, while standard output is unbuffered.
   (c) Standard input is unbuffered, while standard output is line buffered.
   (d) Standard input and standard output are fully buffered.

   A

4. (1 point) **Normally**, which type of buffering is used for standard error.

   (a) Line buffered.
   (b) Unbuffered.
   (c) Fully buffered.

   B

5. (2 points) Consider the following program fragment:

```
int f1, f2;
f1 = open([suitable arguments to open a file for reading and writing]);
f2 = f1;
close(f2);
```

   Which of the following is true after the "*close*" statement?

   (a) The file descriptor *f1* can be used for reading and writing, but *f2* cannot be used.
   (b) Both *f1* and *f2* can be used for reading and writing.
   (c) Neither *f1* nor *f2* can be used for reading or writing.
   (d) *f1* can be used for reading and *f2* for writing.

C

6. (2 points) Which of the following is true about the order of execution of parent and child processes?

   (a) After calling "fork", the parent waits for the child to complete, before it executes any instruction.
   (b) After the parent calls "fork", the child waits until the parent terminates, before it executes any instruction.
   (c) They can execute instructions in any order.

   C

7. (1 points) Which of the following is true after an "exec"

   (a) File descriptors are left open across an exec, unless the $FD\_CLOEXEC$ flag is set for that descriptor.
   (b) File descriptors are closed across an exec, unless the $FD\_OPENEXEC$ flag is set for that descriptor.
   (c) File descriptors are always closed.
   (d) File descriptors are always left open.

   A

8. (1 point) Which of the following is true about a pipe?

   (a) It can be used for communication between a parent and child.
   (b) It can be used for communication between any two processes.
   (c) It can be used for communication *only* between siblings, but not between parent and child.
   (d) It cannot be used for inter-process communication, but only for communication between different threads of the same process.

   A
   (I gave a point even if your answer was B, but please read section 14.2.)