

Name: \_\_\_\_\_

Student ID: \_\_\_\_\_

Score : \_\_\_\_\_ / 50

1. (6 points) There are three things the kernel can do when a signal is received, what are they?

2. (4 points) There are two signals can never be ignored, what are they?

3. (10 points) Fill in the blanks in the figure

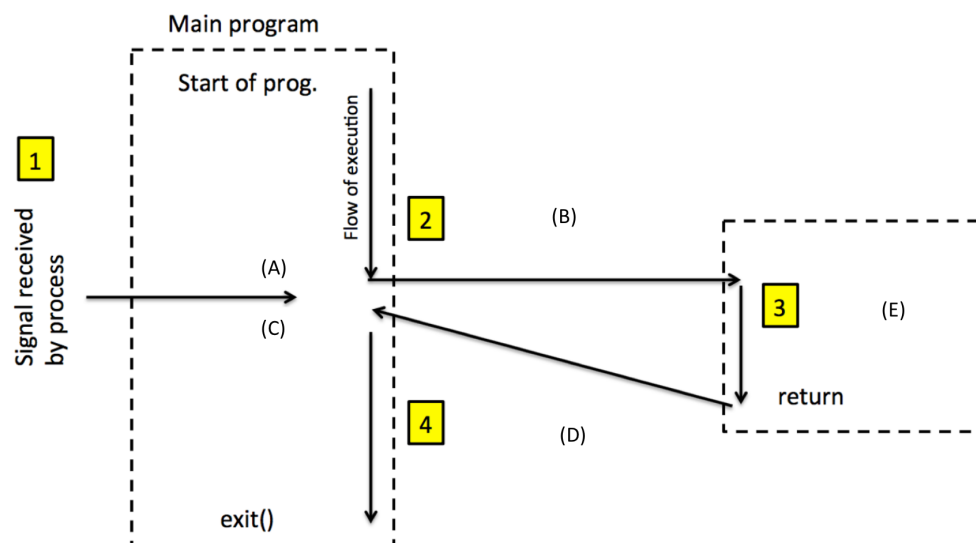


Figure 1: Signal Handling Concept

- (A) \_\_\_\_\_  
(B) \_\_\_\_\_  
(C) \_\_\_\_\_  
(D) \_\_\_\_\_

(E) \_\_\_\_\_

4. (2 points) \_\_\_\_\_ are guaranteed to be safe to call from within a signal handler. They are also called *async-signal safe*.

5. (6 points) Fill in the following blanks

1. We say a signal is \_\_\_\_\_ for a process, it means that an event that causes the signal occurs

2. When the action for a signal is taken, we say signal is \_\_\_\_\_

3. A process has the option to \_\_\_\_\_ the delivery of a signal

6. (8 points) `kill` receives two arguments (`int kill(pid_t pid, int signo)`). You have four choices for the second argument. Distinguish the differences of the following four choices

1. `pid > 0` \_\_\_\_\_

2. `pid == 0` \_\_\_\_\_

3. `pid < 0` \_\_\_\_\_

4. `pid == -1` \_\_\_\_\_

7. (2 points) What header do you need to use `sigaddset()` function?

8. (6 points) How do the following three options change the behavior of `sigprocmask(int how, const sigset_t *restrict set, sigset_t *restrict oset)`

1. `SIG_BLOCK` \_\_\_\_\_

2. `SIG_UNBLOCK` \_\_\_\_\_

3. `SIG_SETMASK` \_\_\_\_\_

9. (6 points) Give at least two different examples of sending a signal using the command prompt