

① Explain about Signaction with a program.

Ans: The Sigaction API is a replacement for the signal API in the latest unix and posix system.

The Sigaction API is called by a process to set up a signal handling method for each signal it wants to deal with.

The Sigaction API Prototype:

```
#include <signal.h>
int sigaction(int signal-num, struct sigaction
              *action, struct sigaction *old-action);
```

Program:-

```
#include <iostream.h>
#include <stdio.h>
#include <unistd.h>
#include <signal.h>
void callme (int sig-num)
{
    cout << "catch signal: " << sig-num << endl;
}
int main (int argc, char * argv[])
{
    sigset_t sigmask;
    struct sigaction action, old-action;
    sigemptyset (&sigmask);
    if (sigaddset (&sigmask, SIGTERM) == -1 || sigprocmask
        (SIG_SETMASK, &sigmask, 0) == -1)
        perror("set signal mask");
    sigemptyset (&action.sa_mask);
    action.sa_handler = callme;
```

```

    action.sa_flags = 0;
    if (sigaction(SIGINT, &action, &old_action) == -1)
        perror("sigaction");
    Pause();
    count << argv[0] << "exists\n";
    return 0;
}

```

② Explain Daemon Characteristics.

Ans: The Daemon Characteristics are: -

- i) We look at some common system daemons and how they relate to the concepts of process groups, controlling terminals, and sessions.
- ii. The `ps` command prints the status of various processes in the system. we will execute: `ps -axj` under BSD Unix.
- iii. On Linux, the `kerneld` daemon provides process context for running scheduled available with various computer systems.
- iv. The linux kernel flushes cached data to disk using two additional daemons `bdflush` and `kupdated`.
- v. The `kswapd` daemon is also known as the `pageout` daemon. It supports the virtual memory subsystem by writing dirty pages to disk slowly over time.
- vi.) The `portmapd` daemon, `portmap`, provides the service of mapping RPC program numbers to network port numbers.