

QUIZ 5 – Process Management

Q1. Draw a binary tree to show the number of processes created by following code. What is the count of number of processes created?

```
int main(void)
{
    fork() && fork();
    fork();
}
```

Q2. Consider the following code. What will be the value of variable x displayed from child processes and parent process assuming that child processes terminates successfully.

```
int main(void)
{
    int x = 10, status, childpid;
    int pid1 = fork();
    if (pid1 != 0)
    {
        childpid = wait(&status);
        x = x + WEXITSTATUS(status);
        printf("%d", x);
    }
    else
    {
        int pid2 = fork();
        if (pid2 != 0)
        {
            childpid = wait(&status);
            x = x + WEXITSTATUS(status);
            printf("%d", x);
            exit(x);
        }
        else
        {
            x = x + 5;
            printf("%d", x);
            exit(x);
        }
    }
}
```

Q3. Write a master-slave implementation for the following situation.

1. Main program accepts 5 filenames of text files as command line argument.
2. You need to create 5 child processes and pass each of the 5 filenames as a command line argument to each of the 5 child process. For example first child will get the filename 1, second child will get filename 2 and so on.

3. Child process will execute `wc` command for the filename provided and display the output from the `wc` command.