King Saud University

**Department of Computer Science**

**CSC227:Operating Systems**

**Tutorial No. 3**

1. What is a process?
2. What does a process include?
3. How does a child process differ from its parent?
4. What is a process control block (PCB)?
5. Is a PCB found all operating systems?
6. Is PCB in all operating systems the same?
7. What does process context switching involves?
8. Context switching operation represents a pure overhead in the OS process management. What does it means?
9. List at least FIVE other kinds of data that will be stored in a PCB that is not shown in PCB diagram.
10. Describe the actions a kernel takes to context switch between processes.
11. What is the advantage of restricting a child process to a subset of the parent’s process?
12. List the reasons when parent may terminate the execution of its child.
13. How does provision of multiple registers help in context switch?
14. Mention the three different queues a process may be place in by the OS before it completes execution.
15. In a context switch, the OS made changes to some fields in the PCB of the current running process. Mention two fields in the PCB that will be updated with new information.
16. How many times the message will be printed?

main()

{

fork();

printf("Hello world");

}

1. How many times does the program below print Hello?

int main()

{

fork();

fork();

fork();

printf( "Hello\n" );

}

1. How many processes are created when the following piece of code is executed?   
   Draw the process tree for the processes thus created.

int main() {

int i;

for (i=0; i<4; i++)

fork();

return 1;

}