



NATIONAL UNIVERSITY
OF COMPUTER & EMERGING SCIENCES

CS2006 – Operating System

Fall 2023

ID: _____

Name: _____

Quiz #: 1

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Marks: 10

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1. Which mode is the processor in at the startup of system? (2)
Processors start in Real mode. *For some basic operations, a computer needs to address all memory locations which is only possible in Real Mode.*
2. When is the Status/Flag Register changed and why? (3)
When a process running in user mode tries to execute a high privileged instruction, the control is passed to kernel by changing the Status/Flag register. After the execution of that instruction, the mode will be changed back to User mode by changing the Flag/Status register again.
3. What can cause a trap to occur? (2)
A trap is occurred in three cases:
 - Due to Software interrupt, *e.g. instruction for i/o request.*
 - Hardware interrupt, *e.g. timer, or i/o complete signal.*
 - Violation
4. What is the difference between “fork()” and “execve()”? (3)
In fork(), the running process is cloned, and both parent and child processes are in ready state after that. In execve(), the parent process hands over the necessary allocations to the child process and gets terminated. Only the child process remains in the ready state after that.