CSC 439/539: Advanced Information Security, Spring 2013
Instructor: Dr. Natarajan Meghanathan
Sample Questions on Module 4: Virtualization

1) What is a Virtual Machine Monitor (VMM)? Explain its significance.

2) What are the two types of virtualization architectures? Briefly explain the basic working principle and the differences between the two architectures. Give two examples for each.

3) Briefly explain a use case scenario where you would employ Hosted virtualization architecture.

4) Briefly explain an example application that uses the Bare-metal virtualization architecture.

5) What are the three virtualization techniques? Briefly explain their basic working principle, the virtualization architecture using each of these techniques and also provide an example for each.

6) Explain how a privileged I/O instruction contained in the compiled code of an application running in a VM is actually executed in the context of Full Virtualization.

7) Briefly explain the main weakness associated with Full Virtualization and how it could be rectified using Parallel Virtualization. What is the limitation associated with Parallel Virtualization?

8) Briefly explain two strategies that could be used to enhance virtualization performance.

9) Briefly explain the three options available for networking the virtual machines running on one or more hosts.