EECS 768 Virtual Machines
Question List for Chapters 5 and 6

1. Explain with figure the main difference between a *High-Level Language* PVM and a traditional compiler-OS based system.
2. Why does a HLL V-ISA not face the following issues to the same degree as virtualizing a traditional ISA:
   a. operating system dependences
   b. memory address formation
   c. precise exceptions
3. Why does Java and other HLL ISAs use a stack-oriented zero-address ISA?
4. Why is code discovery not a problem with HLL-ISA programs? What advantage does that provide?
5. How does Java sandbox and security architecture protect the following resources: a. Java runtime from guest process b. Local files from inadvertent modifications.
6. Explain the significance of Java's *stack walking* feature.
7. What is *garbage collection*? What is its advantages and drawbacks as compared to traditional memory allocation techniques?
8. Explain with example: Java stack *tracking*.
9. How many *processes* can be simultaneously active in a single instance of Java VM?
10. Explain: a. Reference collectors b. Mark and sweep collectors
11. Explain: a. Generational collectors b. Concurrent collectors