

**CSC 438/539 Question Bank - Module 5 – Testing for Software Security: Source Code Analysis**  
**Instructor: Dr. Natarajan Meghanathan, Spring 2014**

1) Briefly explain the following software security vulnerabilities in the following format:

- (a) Cause – Reasons why they could arise in a program
  - (b) Impact – How these vulnerabilities could be misused by an attacker
  - (c) Solution – Discuss potential solution approaches that you would employ to mitigate/remove the vulnerability from a code.
  - (d) Identify the vulnerability with one of the four issues and justify why? *Structural, Semantic, Dataflow, Control flow*
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- (i) System Information Leak vulnerability
  - (ii) Path Manipulation vulnerability
  - (iii) Denial of Service vulnerability
  - (iv) Hardcoded Password Management vulnerability
  - (v) Empty Password Initialization vulnerability
  - (vi) Unreleased Resource Streams vulnerability