**SOLUTION: Take-Home: Quiz 7 (15 pts) – Inheritance in C++**

***Part I: Short Answer.***

**1. (5 pts)** What is inheritance? Explain.

**The ability of a class (derived) to derive properties from a previously defined (base) class. The derived class customizes the properties of the base or acquired class. It’s considered a form of software or code reuse.**

***Part II: Fill-In-The-Blank.***

**2.** **(2 pts)** Inheritance enables \_\_\_\_\_\_\_\_\_**code reuse (just reuse is ok)**\_\_\_\_\_\_\_\_\_\_\_\_\_, which saves time in development and encourages using previously proven high-quality software.

**3. (2 pts – 1 pt/each)** An object of a(n) \_\_\_\_\_\_\_\_\_\_**derived**\_\_\_\_\_\_\_\_\_\_\_\_\_\_ class can be treated as an object of its corresponding \_\_\_\_\_\_\_**base**\_\_\_\_\_\_\_\_\_ class.

**4. (2 pts)** Inheritance is representative of a(n) \_\_\_\_\_\_\_**is-a(n)**\_\_\_\_\_\_\_\_\_ relationship. A Manager object demonstrates this relationship because it can be treated as an Employee object.

**5. (2 pts)** The following class diagram is an example of \_\_\_\_\_**multiple**\_\_\_\_\_\_ inheritance.



**6. (2 pts)** When an object of a derived class is instantiated, the base class’ \_\_\_\_\_\_\_**constructor**\_\_\_\_\_\_\_\_\_ is called implicitly or explicitly to initialize the data members of the base-class in the derived-class object.