# Object-Oriented Programming II CIS 9410

**Spring 2017**

**Sample Examination Questions**

1. Briefly define Polymorphism.
2. Is it possible for some of the elements of an array to be of the class **int** and other elements of the same array to be of the class **float**?
3. What value is associated with **wed** in the following declaration?

**enum days {sun, mon, tues, wed, thur, fri, sat};**

1. What value is returned by the following expression?

**strlen("hi\0there");**

1. What is the maximum number of values that can be stored in the following array?

**float values[10];**

1. Is it possible for a derived class constructor to have the same name as a constructor in its associated base class?
2. Write a statement that is equivalent to the following statement, but does not include the indirection (\*) operator.

**cout << (\*a).b.c;**

1. What is the data type/class of **p** in the following definition statement?

**Arrow \*\*p;**

1. If the function **f1()**, with the prototype shown below, is a member of the class **Inventory**, can **f1()** change the values of the data members of an **Inventory** item to which the **f1()** message is sent?

**Inventory Inventory::f1(const int value);**

For each of the questions below, specify the value that will be assigned to **result**. Assume the following data definition statements hold for each question and an **int** uses 2 bytes.

**int varray[6]={2, 4, 6, 8, 10, 0}, \*p, //assume varray[0] is in memory location**

**v1=7; //104 and v1 is in memory location 140**

1. **result = &v1;**
2. **p = &v1; \*p = 5; result = \*p;**
3. **for (i=0; varray[i]; i++)**

**cout << varray[i];**

**result = i;**

1. If class **X** contains a protected member **xmem**, class **Y** is publicly derived from class **X**, and class **Z** is protectedly derived from class **Y**, can a private member function of class **Y** reference **xmem**?
2. Can a (non-inherited) member function of a derived class **X** have the same prototype as a public member function of the base class from which **X** is derived?
3. Given the following class declaration write a sequence of statements that define a function that overloads the insertion operator ("**<<**") so that it can be used to output the value of a **bclass** object. That is, the function should make valid the statement **cout << bobj;** for the **bclass** object **bobj**.

**class bclass {**

**int a;**

**public:**

**void seta(int v) {a = v;}**

**int geta() {return a;}**

**};**