Quiz 2, INFSCI 0020 Program Design and Software Tools, Feb 15, 2005

Names: Total Points   _____/50

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1. Assuming that `int a` has a value of 3 and that integer array `b` has 7 elements, what is the correct way to assign the value of the sum of 3 and the third element, to the fifth element of the array?
   (a) `b[ a + 1 ] = b[ a ] + 3;`
   (b) `b[ a + 1 ] = b[ a - 1 ] + 3;`
   (c) `b[ a ] + 1 = b[ a + 3];`
   (d) `b[ a + 2 ] = b[ a ] + 3;`

   ANS: (b)

2. Three of the following expressions have the same value. Which of the following's value is different from the others?
   (a) *&Ptr
   (b) &*Ptr
   (c) *Ptr
   (d) Ptr

   ANS: (c)

3. Given that k is an integer array starting at location 2000, $kPtr$ is a pointer to k, and each integer is stored in 4 bytes of memory, what location does $kPtr + 3$ point to?
   (a) 2003
   (b) 2006
   (c) 2012
   (d) 2024

   ANS: (c)

4. `( *max )( num1, num2, num3 );`
   (a) is the header for function `max`
   (b) is a call to the function pointed to by `max`
   (c) is the prototype for function `max`
   (d) is part of a declaration of a pointer to the function `max`

   ANS: (b)

5. Object-oriented programming primarily focuses on
   (a) classes.
   (b) functions.
   (c) variables.
   (d) constants.

6. Classes do not have the property of
   (a) encapsulating data.
   (b) information hiding.
   (c) containing both data and functions.
   (d) usually knowing how other classes are implemented.

7. A class may contain multiple constructors if
   (a) they have different names.
   (b) they have different argument lists.
   (c) they have the same argument list.
   (d) they have different return types.
   ANS: (b)

8. A default constructor
   (a) is a constructor with all default arguments
   (b) is the constructor generated by the compiler when one is not provided by the programmer
   (c) does not perform any initialization
   (d) both (b) and (c)
   ANS: (d)

9. If the line **friend class A;** appears in **class B**, and **friend class B;** appears in **class C** then
   (a) **class A** is a friend of **class C**.
   (b) **class A** can access **private** variables of **class B**.
   (c) **class C** can call **class A**'s **private** member functions.
   (d) **class B** can access **class A**'s **private** variables.
   ANS: (b)

10. If the functions **a()**, **b()** and **c()** all return references to an object **Test** (using the **this** pointer) and function **d()** is declared **void**, which of the following statements has correct syntax?
    (a) **Test.a().b().d();**
    (b) **a().b().Test;**
    (c) **Test.d().c();**
    (d) **Test.a().Test.d();**
    ANS: (a)

11. **static** member functions:
    (a) can use the **this** pointer.
    (b) can only access other **static** member functions and **static** variables.
    (c) cannot be called until their class is instantiated.
    (d) can be declared **const** as well.
    ANS: (b)