Name:

1. Which of the following statements will not produce a syntax error?
    (a) defining a **const** member function that modifies a data member of an object.
    (b) invoking a non-**const** member function on a **const** object.
    (c) declaring an object to be **const**.
    (d) declaring a constructor **const**.
ANS: (c)

2. When composition (one object having another object as a member) is used
    (a) the host object is constructed first and then the member objects are placed into it
    (b) member objects are constructed first, in the order they appear in the host constructor's initializer list
    (c) member objects are constructed first, in the order they are declared in the host's class
    (d) member objects are constructed last, in the order they are declared in the host's class

ANS: (c)

3. 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)

4. Inside a function definition, and for an object with data element **x**, which of the following is not equivalent to **this->x** ?
    (a) ***this.x**
    (b) **(*this).x**
    (c) **x**
    (d) **(* (& (*this))).x**
ANS: (a)

5. 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)

6. Which of the following is false about the **new** operator and the object it allocates memory for?

(a) it calls the object's constructor.
(b) it returns a pointer.
(c) it does not require size of the object to be specified.
(d) it automatically destroys the object after **main** is exited.

ANS: (d)

7. The **delete** operator
   (a) can terminate the program.
   (b) can delete an entire array of objects declared using **new**.
   (c) must be told which destructor to call when destroying an object.
   (d) is called implicitly at the end of a program.

ANS: (b)

8. If **American**s are objects of the same class, which of the following would most likely be a **static** variable of this class?
   (a) age
   (b) the President
   (c) place of birth
   (d) favorite food

ANS: (b)

9. **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)

10. Proxy classes are best described as an example of
    (a) object-oriented programming (as used in the text).
    (b) structured programming.
    (c) information hiding.
    (d) utility functions.

ANS: (c)