Computing III: Packet 2

Name_____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

1) When several items (variables or variables and functions) are grouped together into a single package, that is known as _____. 1) _____

2) The double colon (::) is known as the _____ operator. 2) _____

3) Who can access private members in a class? 3) _____

4) A member function that allows the user of the class to find out the value of a private data type is called a(n) _____. 4) _____

5) A member function that allows the user of the class to change the value of a private data type is called a _____. 5) _____

6) If you have a class with a member function called display(ostream& out), that will send the values in the class to the parameter stream, and you need to call that function from within another member function, how would you call it to print the data to the screen? 6) _____

7) A class in which modifications to the implementation appear to be invisible to the user of the class is known as _____. 7) _____

8) A member function that gets called automatically when an object of the class is declared is called a _____. 8) _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

9) In a structure definition, the identifiers declared in the braces are called 9) _____
A) member names. B) variables.
C) classes. D) structs.

10) You specify an individual member of a struct by using 10) _____
A) an underscore. B) the assignment operator.
C) the dot operator. D) an ampersand.

11) To assign values to a structure variable, you use the 11) _____
A) equals operator. B) less than operator.
C) assignment operator. D) extraction operator.

12) What is wrong with the following structure definition? 12) _____

```
struct MyStruct
{
    int size;
    float weight;
}
```

A) Braces are not needed.
B) missing semicolon
C) cannot have mixed data types in a structure
D) nothing

13) Given the following structure definitions, what is the correct way to print the person's birth year? 13) _____

```
struct DateType
{
    int day;
    int month;
    int year;
};

struct PersonType
{
    int age;
    float weight;
    DateType birthday;
};

PersonType person;
```

A) cout << birthday.year;
B) cout << person.year;
C) cout << person.birthday.year;
D) cout << year;

14) Given the following structure definition, what is the correct way to initialize a variable called today? 14) _____

```
struct DateType
{
    int day;
    int month;
    int year;
};
```

A) DateType today(1,1,2000);
B) DateType today = {1,1,2000 };
C) DateType today = [1,1,2000];
D) DateType today = {1,1,2000,0 };

15) When defining a class, the class should be composed of the kind of values a variable of the class can contain, and 15) _____

A) the keyword private.
B) nothing else.
C) member functions for that class.
D) other class definitions.

16) Which of the following is the correct function definition header for the getAge function which is a member of the Person class? 16) _____

A) int Person:getAge( )
B) int Person::getAge( )
C) int getAge( )
D) int getAge( );

17) Given the following class definition and the following member function header, which is the correct output the private data? 17) _____

```
class Person
{
public:
    void outputPerson(ostream& out);
private:
    int age;
    float weight;
    int id;
};

void Person::outputPerson(ostream& out)
{
    //what goes here?
}
```

A) out << person.age << person.weight << person.id;
B) out << age << weight << id;
C) outputPerson(person);
D) out << person;

18) Why do you want to usually make data members private in a class? 18) _____
A) so that no one can use the class
B) provide information hiding
C) provide data abstraction
D) ensure data integrity
E) B, C, and D

19) A member function of a class should be made private 19) _____
A) never; it is illegal to make a member function private.
B) only if it will never be used.
C) if it will only be used by other members of the class.
D) always.

20) If you design a class with private data members, and do not provide mutators and accessors, then 20) _____
A) the data cannot be changed or viewed by anyone.
B) the class cannot be used.
C) none of the above
D) A and B

21) A data type consisting of data members and operations on those members which can be used by a programmer without knowing the implementation details of the data type is called 21) _____
A) an abstract data type.
B) a primitive data type.
C) an abstract definition type.
D) an available data type.

22) Which part of the ADT tells the programmer using it how to use it? 22) _____
A) the scope resolution
B) the abstractness
C) the implementation
D) the interface

23) If you are designing a class for an ADT, you can tell if the class is an ADT if 23) _____

A) when you change the implementation of the class, none of the rest of the program needs to change.
B) you change the private part and the rest of the program using the ADT does not compile.
C) everything must be changed.
D) when you change the interface of the class, nothing else needs to change.

24) Developing an ADT means that the user of your class does not have to know the details about how the class is implemented. This is known as 24) _____

A) testing and debugging.
B) information hiding.
C) interface.
D) implementation.

25) Given the following class, what would be the best declaration for a mutator function that allows the the class to change the age? 25) _____

```
class Wine
{
public:
      Wine( );
      int getAge( );
      float getCost( );
private:
      int age;
      float cost;
};
```

A) void setAge(int newAge);
B) Wine( );
C) int getAge(int newAge);
D) void setAge( );

26) Given the following class and object declaration, how would you print out the age and cost of a bottle of wine? 26) _____

```
class Wine
{
public:
      Wine( );
      int getAge( );
      float getCost( );
private:
      int age;
      float cost;
}

Wine bottle;
```

A) cout << bottle.getAge( ) << bottle.getCost( );
B) cout << bottle.getAge << bottle.getCost;
C) cout << bottle.age << bottle.cost;
D) cout << bottle;
E) cout << Wine.age, Wine.cost;

27) Data members or member functions of a class that are declared to be private 27) _____
A) are considered to be global variables.
B) may not be accessed by the class.
C) may only be accessed by the main program.
D) may only be accessed by members of the class.

28) Member functions of a class 28) _____
A) may not be in the private section. B) cannot be called in the main program.
C) must be in the private section. D) may be in either section.

29) In a struct, all members are _____ by default. 29) _____
A) private B) public C) global D) all of the above

30) In a class, all members are _____ by default. 30) _____
A) private B) public C) global D) all of the above

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

31) A struct variable is declared differently from a predefined type such as an int. 31) _____

32) Two different structure definitions may have the same member names. 32) _____

33) A structure can only be passed to a function as a call-by-value parameter 33) _____

34) A function may return a structure. 34) _____

35) Different classes may not have member functions with the same name. 35) _____

36) A class member function may be private. 36) _____

37) Class data members are almost always public. 37) _____

38) It is possible to have multiple private labels in a class definition. 38) _____

39) The assignment operator may not be used with objects of a class. 39) _____