Class and Objects

Exercises

Fill in The Blanks

1. A class provides __*security*__

2. Class __*access*__ specifies the types and scope of its members.

3. Data hiding is implemented through the __*private*__ visibility label.

4. A function defined inside the class is treated as an __*member*__ function

5. Variables of a class are called __*object*__

6. member functions can be accessed with _*object*___ and __*pointer*__

7. An object is an ____*instance*___ of a class.

8. Memory for member functions is allocated when __*object created*__

9. static data members are automatically initialized to __*0*___

10. in technique a copy of the actual objects is created and passed to the called functions. __*Call by value*__

11. Local classes can use any global variable but with __*scope resolution*__

12. while declaring an object of inner class, name of the inner class must be proceded with ***name of the outer class*** ✓

13. ___*friend*___ function and __*friend*__ classes breaks the rules of the data hiding in C++. ✓

14. Keyword friend is used in function __*declaration*__ but not in function__*defination*__ ✓

15. friendship are__*explicit*__ ✓

16. ___*bit field*___ allows users to reserve the exact amount of bits required for storage of values. ✓

17. _*size of*___ operator cannot be applied to bit -field components. ✓

18. The default integer type for a bit field is ___*unsigned*___ ✓

19. keyword private and public are called __*access*__specifiers. ✓

State True or False

1. By default member of structure are private. ***false*** ✓

2. Member of the structure can be accessed from the main() using the dot operator ***true*** ✓

3. All members declared public cab be accessed only from within the class.***false*** ✓

4. We can have a class with all the private members. ***true*** ✓

5. We cannot have private member functions ***false*** ✓

6. Memory is allocated when we declare the class **_false_** ✓

7. All the member functions defined outside the class are inline
   false ✓

8. All objects of the class share its member functions **_true_** ✓

9. only one copy of the static member is created in memory ✓
   true

10. static data members are a part of the objects. **_false_** ✓

11. Static and non static member functions in the same
    class which same names and same number and types of
    the arguments is possible. **_false_** ✓

12. This pointe is passed explictly to the member function **_false_** ✓
13. this pointer is a part of the object itself. ~~**_false_**~~ true ✓

14. local classes can have static data members. **_true_** ✓

15. Member functions of a local class can be defined inside or
    outside the class. **_true_** ✓

16. Friend functions are external functions with special
    access privileges **_true_** ✓
17. friend function can access this pointer. **_false_** ✓

18. friendship is explicitly specified. **_true_** ✓

19. You can have arrays of bit fields. **_false_** ✓

20. Unnamed bit field can be referenced. **_false_** ✓

21. A programmer can change the value of this pointer. **_false_** ✓

Multiple Choice Questions

1. In C++, the declaration of functions and variables are collectively called …….
A) class members
B) function members
C) object members
D) member variables

2. The keywords private and public used in C++ are known as ………….
A) keyword labels
B) visibility labels
C) declaration labels
D) display labels

3. The variables declared inside the class are known as data members and functions are known as ………….
A) data functions
B) inline functions
C) member functions
D) member variables

4. Only the …………………. can have access to the private members and private functions.

A) data functions
B) inline functions
C) member functions ✓
D) member variables

5. The binding of data and functions together into a single class-type variable is referred to as …………..
A) encapsulation ✓
B) data abstraction
C) polymorphism
D) all of the above

6. When the function is defined inside a class, it is treated as
………………….
A) data function
B) inline function
C) member function ✓
D) member variable

7. A member function can be called by using its name inside another function of the same class, which is known as …………
of member function.
A) sub function
B) sub member
C) nesting ✓
D) sibling

8. A ………………. member function can only be called by another function that is member of it's class.
A) friend

B) static

C) public

D) private ✓

9. ……………….. member variable is initialized to zero when the first object of its class is created where no other initialization is permitted.

A) friend

B) static ✓

C) public

D) private

10. Static variables are associated with the class itself rather than with any class object, they are also known as…………….

A) class variables ✓

B) object variables

C) function variables

D) internal variables

11. Static variables are like ………………… as they are declared in a class declaration and defined in the source file.

A) inline member function

B) non inline member function

C) static member function

D) dynamic member function

12. A …………….. can have access to only other static members declared in the same class.

A) constant member function

B) private member function

C) static member function ✓

D) friend function

13. A static member function can be called using the ………………… instead of its objects.

A) variable name

B) function name

C) Class name ✓

D) object name

14. While using an object as a function argument, a copy of the entire object is passed to the function in ………….. method.

A) pass-by-value ✓

B) pass-by-reference

C) pass-by-variable

D) pass-by-function

15. A ……………………., although not a member function, has full access rights to the private members of the class.

A) constant member function

B) private member function

C) static member function

D) friend function ✓

16. ……………. can be invoked like a normal function without the help of any object.

A) constant member function

B) private member function

C) static member function

D) friend function

17. A ………….. can only be called by another function that is member of its class.

A) constant member function

B) private member function

C) static member function

D) friend function

18. If a member function does not alter any data in the class, that may be declared as ………………..

A) constant member function

B) private member function

C) static member function

D) friend function