OOPS MCQ

Q-1 Which of the following in Object Oriented Programming is supported by Function overloading and default arguments features of C++?
A) Inheritance
B) Abstraction
C) Polymorphism
D) Abstraction

Q-2 Which of the following is incorrect with respect to constructors in C++?
A) A constructor can call member function of its class.
B) If the default constructor is defined explicitly then, compiler will not define the constructor implicitly, it calls the constructor implicitly.
C) A constructor cannot dynamically allocate for an object at the time of their construction.
D) These cannot be static

Q-3 Predict the output?

```
#include <iostream> using namespace std;
class Test {
int x; Test() {
x = 5;
}

};

int main() {
```

```
Test *t = new Test;

cout << t->x;
}
```
A) 0
B) 5
C) Garbage value
D) Compiler error

Q-4 Which of the following is correct for virtual function in C++ ? (More than one)
a) Must be declared in public section of class.
b) Virtual function can be static.
c) Virtual function should be accessed using pointers.
d) Virtual function is defined in base class.

Q-5 Multiple inheritance leaves room for a derived class to have _____ members.
A) Dynamic
B) Private
C) Public
D) Ambiguous

Q-6 What makes a class abstract?
    A) The class must not have method definitions.
    B) The class must have a constructor that takes no arguments.
    C) The class must have a function definition equal to zero.
    D) The class which cannot be instantiated as they are mainly for inheritance.

Q-7 When two or more classes serve as base class for a derived class, the situation is known as _____.

A) multiple inheritance
B) Inheritance
C) Encapsulation
D) hierarchical inheritance

Q-8 _____ allows for the separation of object interactions from classes and inheritance into distinct layers of abstraction
A) Dispatching
B) Loosening
C) Detaching
D) Decoupling

Q-9 What is the use of parametric polymorphism?(more than one)

A) A function or a data type can be written generically so that it can handle values identically without depending on their type
B) A function or a data type can be written generically so that it can handle values identically being dependant on their type
C) A function or a data type that can accept parameters
D) Both a and c

Q-10 Which of the following is false for friend function?
A) Allows access to private or protected data in a class from outside the class
B) both a and c
C) Too many friend functions may hamper data security
D) When a function needs to operate on private data in objects from two different classes, the function can be declared as a friend in any of the classes

Q-11 The _____ functions of the base class are also not inherited

A) friend
B) Pure virtual function
C) Both a and b

D) Virtual function

Q-12 _____ is actually a parameterized constructor which takes some parameters in order to create instance of a class.

A) Implicit constructor
B) Explicit constructor
C) Virtual constructor
D) Parameterized constructor

Q-13 Which of the following is false for a destructor?
A) The destructor has the same name as the class
B) If the object was created with a new expression, then its destructor is called when the delete operator is applied to a pointer to the object
C) Its main purpose is to clean up and to free the resources
D) none

Q-14 Which of the following is true about virtual functions in C++.
    A) Virtual functions are functions that can be overridden in derived class with the same signature.
    B) Virtual functions enable run-time polymorphism in a inheritance hierarchy.
    C) If a function is 'virtual' in the base class, the most-derived class's implementation of the function is called according to the actual type of the object referred to, regardless of the declared type of the pointer or reference. In non-virtual functions, the functions are called according to the type of reference or pointer.
    D) All of the above

Q-15 Which of the following are true about static member function?
   1) They can access non-static data members
   2) They can call only other static member functions
   3) They can access global functions and data
   4) They can have this pointer
   5) They cannot be declared as const or volatile

Q-16 Which of the following is the correct class of the object cout?
A) iostream
B) Istream
C) Ostream
D) ifstream

Q-17 Which of the following problem causes an exception?
A) Missing semicolon in statement in main().
B) A problem in calling function
C) A syntax error
D) A run-time error