

Unit 1: Principles of Object Oriented Programming

Short Questions (1 to 3 marks each):

1. What is object?
2. Which method cannot be called through object? How to call those methods?
3. What is the use of destructor? How is it created?
4. List out the advantages of inline function.
5. List out the application of object oriented programming.
6. List out the disadvantages of inline function.
7. How does a constant defined by 'const' differ from the constant defined by the preprocessor statement '#define'?
8. What is the advantage of new over malloc()?
9. What is constructor with default argument?
10. Explain copy constructor.
11. When to make a function as inline?
12. What is the use of new operator?
13. What are the advantages of cin and cout compared to printf and scanf?
14. What are the uses/ application of scope resolution operator OR
How scope resolution operator can be used in different ways in OOP?
15. Define static data member and function.
16. What is dynamic constructor?
17. Explain new and delete operator.
18. What is destructor? How can you invoke a destructor?
19. What do you mean by array of objects? How are they created?

Detailed Questions (4 to 10 marks each):

1. List out memory management operators. Point out the reason why using new is better idea than using malloc().
2. In which circumstances function can be made as friend? Write advantage of friend function. Demonstrate one example of friend function.
3. What do you mean by constructor? Explain parameterized constructor with an example.
4. What is truly Object Oriented Programming? Can we say C++ is truly object oriented programming? Justify your answer.
5. Compare object oriented programming and procedure oriented programming.
6. Explain constructor with example. How do we call constructor?

7. What is the major use of data members and member functions as static? explain it with example.
8. explain inline function with example.
9. What do you mean by default argument? when it is useful?
10. List out the features of Object Oriented Programming. explain any two of them.
11. What do you mean by object as function argument? Explain pass by value and pass by reference with example.
12. What is destructor? How destructor gets called? Discuss importance of destructor.
13. Differentiate between call by value and call by reference with example.

Unit 2: Object Oriented Properties

Short Questions (1 to 3 marks each):

1. What is abstract class? What is use of it?
2. What is containership?
3. What is difference between private and protected visibility modes?
4. What is the use of protected modifier?
5. How the constructor is called in multilevel inheritance?

Detailed Questions (4 to 10 marks each):

1. Explain different visibility modes with example.
2. What do you mean by hybrid inheritance? Explain how to remove ambiguity in the case of hybrid inheritance?
3. What do you mean by constructors in derived classes? If constructor function in derived and base class, then which constructor function get executed explain with example.
4. What do you mean by containership? How it differ from inheritance? Explain with an proper example.
5. What do you mean by inheritance? List out the types of inheritance. Explain how to remove ambiguity in the case of hybrid inheritance.
6. Explain any three concepts of OOP.
7. Explain reference variable. Give its application with example.
8. What is inheritance? Explain multiple inheritance with example.
9. Write a note on data abstraction and encapsulation.

10. Demonstrate virtual base class with example.
11. How do the properties of following two derived class differ:
 - i. class D1: private B, public C {.....};
 - ii. class D2: protected B, private C {.....};
12. Differentiate between multilevel and multiple inheritance.
13. Explain execution of base class constructors for multilevel and multiple inheritance.

Unit 3: Polymorphism

Short Questions (1 to 3 marks each):

1. Explain pure virtual function.
2. Which operators can act on only one operand?
3. Explain use of late binding.
4. Explain pointer to object.
5. What is polymorphism?
6. List out the operators which cannot be overloaded.
7. List out the use of this pointer.
8. What is function overloading?
9. What is the purpose of dynamic binding?
10. What are the rules for unary operator overloading?

Detailed Questions (4 to 10 marks each):

1. When can we use virtual base class? How is it different from virtual function?
2. Differentiate between unary and binary operator overloading.
3. Explain compile time polymorphism with an example.
4. Explain function overloading with example.
5. Explain operator overloading with example.
6. What is overloading of an operator? When is it necessary to overload an operator?
7. Explain difference between overloading and overriding.
8. Explain pure virtual function. When is it necessary? explain rules of pure virtual function.

Unit 4: Data Files

Short Questions (1 to 3 marks each):

1. State the difference between ios::app and ios::ate mode.
2. Explain fill() function.

3. What is stream?
4. Differentiate between seekp() and seekg().
5. Explain different methods to open a file. what is the use of SHOWPOINTFLAG?
6. Give the difference between tellp () and tellg() function in random access file.
7. Explain any two manipulator functions with example.
8. How to print trailing zeroes using ios function and manipulators.
9. Explain each function for manipulations of file pointers.
10. How getline() works?

Detailed Questions (4 to 10 marks each):

1. What are the different methods to open a file. Explain with proper example.
2. What is manipulators? Explain setprecision() and setiosflags().
3. What are manipulators? How can you create your own manipulators?
Explain with an example.
4. What is file mode? Explain various file modes .

Unit 5: Exception Handling

Short Questions (1 to 3 marks each):

1. What is an exception?
2. Explain try block.

Detailed Questions (4 to 10 marks each):

1. Explain exception handling with example.
2. Explain about exception. Can we improve our software quality using exception handling .justify your answer.