

OBJECT ORIENTED PROGRAMMING USING C++

Time Allowed: 1.5 Hours

Full Marks: 70

Answer to Question No.1 is compulsory and Answer any two questions from the rest.

1. A. Choose the correct alternative (any ten): 10x2
- i) In C++, the functions of a class are called:
 - a. Attributes
 - b. Methods
 - c. Member function
 - d. Both a and b
 - ii) Inheritance is the process of creating new classes called:
 - a. Super classes
 - b. Parent classes
 - c. Base classes
 - d. Derived classes
 - iii) The derived class is also called:
 - a. parent class
 - b. sub class
 - c. child class
 - d. both b and c
 - iv) Polymorphism is achieved through:
 - a. destructor
 - b constructor
 - c. virtual function
 - d. overloading operator
 - v) The extension of C++ source program is:
 - a. ccp
 - b. cpp
 - c. exe
 - d. obj
 - vi) Default constructor has ____ arguments.
 - a. No argument
 - b. One Argument
 - c. Two Arguments
 - d. None of these
 - vii) A class whose objects can not be created is known as ____
 - a. Absurd Class
 - b .Dead Class
 - c. Super Class
 - d. Abstract Class
 - viii) Reusability of code in C++ is achieved through ____
 - a. Polymorphism
 - b. Inheritance
 - c. Encapsulation
 - d. Both A and B

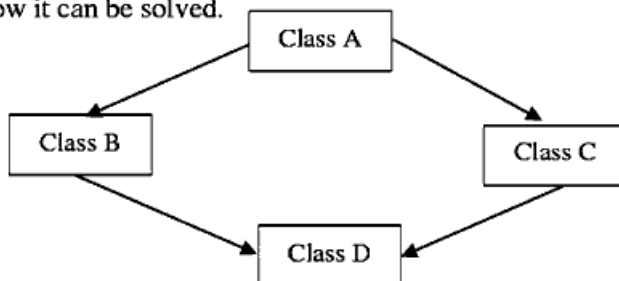
- ix) What is the size of a boolean variable in C++? – a) 1 bit, b) 1 byte, c) 4 bytes, d) 2 bytes.
- x) When can we have two classes with same name? – a) We can't have, b) In different work space, c) Can have but in different file, dd) We can have in any scenario.
- xi) In C++ Program, inline functions are expanded during ____
 - a.Run Time
 - b.Compile Time
 - c.Debug Time
 - d.Coding Time
- xii) C++ is an
 - a. Object-oriented programming language.
 - b. Event-driven programming language.
 - c. Structured programming language.
 - d. None of these.

B. Answer the following questions (any five):

5x4

- i) What is the difference between macro and inline function?
- ii) Write down the difference between new and malloc?
- iii) What are the basic concepts of Object oriented Programming.
- iv) State the differences between IS-A and HAS-A relationship.
- v) What is the use of friend function?
- vi) State the characteristics of Static data.
- vii) What is method overriding?
- viii) State the use of scope resolution operator and its use in C++.

2. a) What is scope resolution operator? Why is it used in C++?
 b) Name the type of inheritance shown in the above diagram. State the ambiguity problem in it and how it can be solved. 7+8



3. Write short notes (any two): (7.5x2=15)
- a) Exception Handling mechanism
 - b) Template in C++
 - c) Call by value & Call by reference
4. a) Define Constructor. What are the special features of Constructor?
 b) Discuss different types of Constructor with suitable code.
 c) Write a C++ program to show how Constructor can be overloaded. (3+3+4.5+4.5)
5. a) What is Inheritance? State and describe visibility modes and its effects used in inheritance.
 b) Discuss different types of Inheritance with proper diagram.
 c) Write a C++ program to show the application of Multilevel Inheritance (2+3+5+5)
6. a) What is Inline function?
 b) How does Inline function differ from Pre-processor Macro?
 c) Discuss the rules of Operator Overloading. What are the operators that cannot be overload? (2+5+5+3)

7. a) What is Polymorphism?
b) Differentiate between Run time & Compile time Polymorphism.
c) Discuss Virtual and Pure Virtual function with suitable code.

(3+5+7)
