BCA 10 Object Oriented Programming in C++

SET: 1

Section-A
(Very Short Answer Questions)

1. (i). Which concept of OOP is implemented by Operator overloading?
   (ii). Define Structure in C++.
   (iii). Define Classes in C++.
   (iv). What is default visibility mode of data members in a class?
   (v). Define templates.
   (vi). What is call by value.
   (vii). What is a Constructor?
   (viii). Which non-member function can have access to private and public members of a class?
   (ix). What is operator overloading?
   (x). When a derived class is derived from more than one base class then what is this type of inheritance?

Section-B
(Short Answer Questions)

2. Differentiate between structures and unions.
3. Explain scope resolution operator with help of an example.
4. Explain the concept of Data hiding in C++.
5. Explain the following manipulators: setw, setfill, setprecision & endl.
6. Explain the mechanism of Exception handling?
7. Explain how a constructor can be overloaded with the help of an example.
8. What is Inline Function? Explain with the help of an example.
9. What is type conversion? Explain with the help of an example.

Section-C
(Long Answer Questions)

10. What is Destructor? Explain different types of Constructors.
11. What is Inheritance? Explain different types of Inheritance.
12. Write a C++ program using new operator to multiply two matrices.
13. What is static class member? Write a program to count number of objects created for a particular class using static data member.

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SET: 2

Section-A
(Very Short Answer Questions)

1. (i). Define an Object.
(ii). What is a friend function?
(iii). Which feature in OOP allows reusing code?
(iv). Define base class & derived class.
(v). Define file stream objects.
(vi). Write the syntax of multiple inheritance.
(vii). If a protected member is inherited in public mode, then in which mode it is available to the child mode?
(viii). What is this pointer?
(ix). What is a manipulator?
 (x). Which function reads a line at a time from a file?

Section-B
(Short Answer Questions)

2. What is Visibility mode? Explain different inheritance visibility modes supported by C++?
3. Explain Reference Variables with the help of an example.
4. What is Virtual function? Explain function over-riding with the help of an example.
5. Explain the pointers & its types supported by C++?
6. What are formatted I/O Operations? Explain different types of console I/O functions.
7. Explain the following functions: get(), put() and getline().
8. Explain generic programming? How it is implemented in C++?
9. What is an object oriented programming? List all its characteristics.

Section-C
(Long Answer Questions)

10. How will you overload binary & unary operators? Discuss both processes with the help of programming implementation.
11. Write a C++ program using function overloading to add two complex numbers.
12. Write a C++ program using functions to find prime numbers up to a given number.
13. Assume that the test result of a batch of students is stored in three different classes. Class STUDENT stores the roll-numbers, class TEST stores the marks obtained in two subjects and class RESULT contains the total marks obtained in the TEST. The class RESULT can inherit the details of the marks obtained in the TEST and the roll-numbers of STUDENTS through multi-level inheritance. Write a C++ program to implement multi-level inheritance that take input and display the result of a student.