



- ii) Identify the user-defined types from the following :
- a) enumeration
  - b) classes
  - c) both enumeration and classes
  - d) int.
- iii) What are mandatory parts in the function declaration ?
- a) Return type, function name
  - b) Return type, function name, parameters
  - c) Parameters, function name
  - d) Parameters, variables.
- iv) Which of the following operators cannot be overloaded ?
- a) +
  - b) ?:
  - c) -
  - d) %
- v) If a class is derived privately from a base class then
- a) no members of the base class is inherited
  - b) all members are accessible by the derived class
  - c) all the members are inherited by the class but are hidden and cannot be accessible
  - d) no derivation of the class gives an error.

vi) Streams that will be performing both input and output operations must be declared as class

- a) iostream
- b) fstream
- c) ostream
- d) stdiostream.

vii) Which is the most significant feature that arises by using template classes ?

- a) Code readability
- b) Ease in coding
- c) Code reusability
- d) Modularity in code.

viii) An inline function is expanded during

- a) compile-time
- b) run-time
- c) never expanded
- d) end of the program.

ix) Inline functions are avoided when

- a) function contains static variables
- b) function have recursive calls
- c) function have loops
- d) all of these.

x) Which statement is used to catch all types of exceptions ?

- a) Catch( )
- b) Catch(Test t)
- c) Catch(...)
- d) None of these.

xi) Which of the following is correct ?

- a) C++ allows static type checking
- b) C++ allows dynamic type checking
- c) C++ allows static member function to be of type const.
- d) C++ allows both static and dynamic type checking.

xii) A virtual function that has no definition within the base class is called

- a) Pure virtual function
- b) Pure static function
- c) Pure Const. function
- d) Friend function.

**GROUP - B**

**( Short Answer Type Questions )**

Answer any *three* of the following.  $3 \times 5 = 15$

2. Define a 'date' object with suitable constructor method.  
Write a member function to swap two 'date' objects.
3. Differentiate between if-else and switch-case statements with example.
4. What is exception ? Explain exception handling mechanism in C++ with suitable example.  $2 + 3$
5. List some of the special properties of the constructor functions. In which direction constructors and destructors are invoked when base class is one and derived class are two ?
6. Explain data abstraction with example.

**GROUP - C**

**( Long Answer Type Questions )**

Answer any *three* of the following.  $3 \times 15 = 45$

7. a) How the derived class constructors are used to pass parameters to base class in multilevel inheritance ? Explain with program.  $7$

- b) Write a program in C++ to demonstrate example of multiple inheritance. 8
8. a) Declare a class matrix and write a function to read all the elements of a matrix of size  $m \times n$  from the keyboard for creating objects. 5
- b) What is friend function ? What are the merits and demerits of using friend function ? Explain with example. 2 + 3
- c) What is friend class ? Explain with example. 2 + 3
9. Write short notes on the following : 3 x 5
- a) Pure virtual function
- b) Abstract Base class
- c) Dynamic binding.
10. a) How many stream classes are required for opening files ? Explain each. 2 + 3
- b) Write a note on file pointer manipulation. 5
- c) Copy the content of one file to another file. 5

11. a) What is STL ? Explain STL programming model.
- b) Write a class vector with a series of float values and perform the following operations :
- i) To create a vector
  - ii) To display a vector.
- c) Write the methods in String class.  $5 + 5 + 5$
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