PROGRAMMING IN 'C++'

Time : 3 Hours   *Maximum Marks : 90*

Note : Attempt five questions in all. Select one question from each unit. Question No. 1 is compulsory. All questions carry equal marks.

(Compulsory Question)

1. a) a_1 and a_2 are two objects of class 'space' then distinguish between these two statements

   space a2 (a1);

   and space a2 = a1;

   b) Why 'New' operator is more advantageous than using malloc function in C++ language?

   c) Can template function be overloaded?

   d) When an exception is not caught? How the process is then 'aborted'?

   e) What do you mean by Parametrized constructor in C++ language? Explain with an example.

   f) What is the difference between Opening a file with a constructor function and Opening a file with open ( ) function?

SECTION-I

2. (a) Explain the role of 'Protected' access specifier in inheritance?

   b) What is the difference between Function overloading and Function overriding? Explain with an example.

3. a) What do you mean by Dynamic initialization of objects? Why do we need to this?

   b) A desctructor can not be declared as static, constant or volatile? Explain.

SECTION-II

4. a) How do you achieve Compile time and Run time polymorphism?

   b) What are the applications of Virtual function? Also describe the limitations of virtual function.

5. a) What is Type conversion function? How is it created?

   b) Write a program in C++ language to convert a Class A with Class B using (i) Constructor, and (ii) Type conversion function.

Section-III

6. (a) What is a template in C++ and why do we need it?

   b) Write a function template to add two data type integers and floats using a template.

7. What is the difference between an Exception and an Interrupt? Explain the following :

   a) Throwing exception from a function.

   b) Handling exceptions from classes and objects.

Section-IV

8. a) Describe briefly the features of I/O system supported by C++.

   b) Write notes on the following :

i) Pre-defined manipulators.

ii) User-defined manipuators.

9. a) What are the steps involved in using a file in a C++ program?

b) What are the advantages of savting data in binary file?

c) What is a File mode? Describe various file mode options available.

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