313304

Instructions –   (1) All Questions are *Compulsory.*

(2) Answer each next main Question on a new page.

(3) Figures to the right indicate full marks.

(4) Assume suitable data, if necessary.

(5) Use of Non-programmable Electronic Pocket Calculator is permissible.

(6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. **Attempt any FIVE of the following :**   **10**

a) Define object with example.

b) Define constructor. List its types.

c) List the basic concepts of oop.

d) State the syntax of class declaration in C++.

e) State function overloading.

f) Write a process to create and initiative pointer.

g) Define Inheritance. List its types.

2. **Attempt any THREE of the following :**   **12**

a) Write a process to define member functions outside the class.

b) Write a program in C++ to demonstrate constructor overloading.

Marks

   c) Differentiate between compile-time and run-time polymorphism with examples.

   d) Explain multiple inheritance with suitable example.

3.   **Attempt any <u>THREE</u> of the following :**   **12**

   a) Explain the concept of virtual functions with suitable example.

   b) Write a program to demonstrate unary operator overloading using member function.

   c) Explain the use of 'friend' function with example.

   d) Explain the concept of constructor in Derived class with suitable example.

4.   **Attempt any <u>THREE</u> of the following :**   **12**

   a) Explain file handling modes with suitable example.

   b) Write a program to read and write data in file.

   c) Write a program to demonstrate the use of 'this' pointer.

   d) Define copy constructor and explain its use with example.

   e) Differentiate between class and structure in C++.

5.   **Attempt any <u>TWO</u> of the following :**   **12**

   a) Write a program to demonstrate single and multilevel inheritance.

   b) Explain types of files in file handling.

   c) Explain the concept of virtual base class with a suitable example.

6.   **Attempt any <u>TWO</u> of the following :**   **12**

   a) Develop a program in C++ that includes, constructor and destructor.

   b) Write a program to count no. of lines in file.

   c) Describe the process of memory allocation for object with suitable diagram.

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