

[Time:2.30 Hrs]

[ Marks:75]

**Please check whether you have got the right question paper.**

- N.B: 1. All question are compulsory.  
2. Figures to the right indicate full marks.

- Q.1 Attempt **any three** of the following: 15  
 a. Differentiate Procedure Oriented Programming & Object Oriented Programming  
 b. Differentiate between information hiding and encapsulation.  
 c. What is Inheritance? State its types?  
 d. Explain Polymorphism in detail  
 e. Explain the terms a) Dynamic Binding b) Message Passing  
 f. What is the relation between Object and Class.
- Q.2 Attempt **any three** of the following: 15  
 a. Differentiate between C and C++  
 b. Explain the application of constructors and destructors in C++ programming.  
 c. Explain Operators in C++  
 d. Explain the concept of pointer to object with suitable example.  
 e. What is friend class? Write a program to illustrate the concept of friend class.  
 f. Define parameterized constructor by taking a C++ program.
- Q.3 Attempt **any three** of the following: 15  
 a. Write a note on Unary Operators Overloading in C++.  
 b. What is abstract class? State the properties of abstract class  
 c. Demonstrate the use of Static functions with an example.  
 d. Explain Conversion from Built-in types to class type.  
 e. What are the limitations of Operator overloading and Functional overloading?  
 f. What is Virtual Destructor? Explain with example.
- Q.4 Attempt **any three** of the following: 15  
 a. What are the advantages of using exception handling mechanism in a program?  
 b. Explain the mechanism of handling the exception with suitable example.  
 c. Write a program to implement the concept of single level inheritance.  
 d. Explain in brief Multiple Inheritance  
 e. Explain the use of throw and catch keywords with proper syntax.  
 f. Describe the syntax of the single inheritance in C++
- Q.5 Attempt **any three** of the following: 15  
 a. Explain with example the use of class templates.  
 b. Briefly describe the class hierarchy provided by C++ for streams.  
 c. Write the syntax and use of getline () and write () function  
 d. What is Function Templates and explain with an example  
 e. What is the difference between a text file and a binary file?  
 f. Write a program to read a file through C++ program

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