

Max Time : 3 Hours

Max Marks : 60

Section A**Attempt any four questions from Section A. Each Question is of 5 marks.**

- Q1. (a) Differentiate between if statement and switch statement.
(b) What is a variable? Describe the rules for declaring a variable.
(c) Differentiate between parameter passing by value and parameter passing by reference in a function.
(d) Explain the syntax for class declaration and class function definition.
(e) Describe the purpose of destructor using an example.
(f) What is operator overloading? Explain using an example.

Section B**Attempt four questions selecting one question from each subsections I , II , III and IV.
Each question is of 8 marks.****Subsection I**

- Q2. (a) What is a reference variable? (2)
(b) What is a statement? Describe the various types of statements. (1+5)

Or

- Q3. Define operator. Explain the syntax and purpose of different types of operators. (2+6)

Subsection II

- Q4. (a) Write a program in C++ to create a function search() and pass an array of integers to the function to search a given element using binary search. (6)
(b) What is a pointer variable? (2)

Or

- Q5. (a) What is a function? Differentiate between user-defined and built-in function. (2+2)
(b) Write a program in C++ to create a function sort() to arrange the elements of a numerical integer array in descending order. (4)

Subsection III

- Q6. (a) What is a base class? Explain the syntax of deriving a class from a base class using different derivations. (1+4)
(b) Explain the utility of friend function using an example? (3)

Or

- Q7. What is a constructor? Explain the various types of constructors available in C++. (8)

Subsection IV

- Q8. What is function overloading? Write a program in C++ to add three float numbers using function overloading. Also define a function with one default argument. (2+6)

Or

- Q9. Explain the different classes and header files used for implementing files in C++. (8)

Section C**Q10 is compulsory and is of 8 marks.**

- Q10. Describe the Customer Relationship Management System of XYZ organization using classes, inheritance and function overloading.