1) State advantages of Object Programming over Procedure oriented programming.
2) What do you mean by Late Binding and Early Binding? Distinguish between them.
3) Explain various applications of OOPs.
4) What are feature of the C++ language?
5) Write a short note on Data Abstraction.
6) What do you mean by Data Encapsulation and Data binding?
7) What is polymorphism? How is polymorphism achieved at compile time and runtime?
8) What is OOP? State advantages of OOP.
9) "C++ is a pure Object Oriented Language". Justify T/F.
10) What is extraction and insertion operator?
11) Give Syntax to create a reference variable
12) Why can't you initialize within a class?
13) Write a C++ statement to allocate memory dynamically for an array of 20 pointers to object if some class, say A
14) How does a declaration differ from class definition?
15) Define the terms 1. Class 2.Object 3. Identifiers?
16) Write a program to find product of digits of an integer number n.
17) Write a c++ program to find maximum of 10 numbers.
18) Write a C++ program to generate 20 terms of Fibonacci sequence of number
19) Write a C++ program to check whether number n is Prime or not.
20) Write a c++ program to read the values of a and b and display the value of x where x=a/(b-c)
21) Write a reference variable? What is mean by passing argument by reference> Explain with example.
22) What is friend function? What are merits and demerits if using friend function?
23) What do you meant by dynamic initialization of objects? Why do we need to do this>
24) What is stream? Describe briefly the features of I/O system supported by C++ with reference to C++ stream classes
25) What is scope resolution operator? What are the applications of it?

26) What is a friend class? What are advantage abd disadvantage in using friend classes in C++? Give example

27) What is nested class? How is nested class defined and declared in C++?

28) Create a class FLOAT that contains one float data member. Overload all four arithmetic operators so that they operate on object of FLOAT.

29) Write a short note on Inline function. Write Advantage and disadvantage of inline function.

30) Why can't static member function access a non-static member of a class?

31) What is static data member and static member function? Explain with example.

32) Write a function that prints specified number of blank lines on the screen. This number should be default 1.

33) Write a C++ program to read the set of n integers and store it in 1D array. Also read a set of floating point numbers of same size and store it in another array and print the contents of these two array separately using the function overloading technique.

34) Write a C++ program to read a set of lines and find number of character, words and lines in a given text using member class.

35) What is overloading in OOP? What is function overloading and operator overloading on C++? Give suitable example.

36) Write an OOP in C++ using function overloading for addition of two given matrices, two floating point number matrices.

37) In which circumstances, programmer can not telly on compiler supplies copy constructor, instead needs to write his/her own copy constructor?

38) How many times will the constructor of a class student be invokes for the following statement Student S, *P; ? [SA]

39) Write a note on destructor with suitable example [SA]

40) Write a note on constructor with suitable example. Write the rules for writing constructor function? What are the uses of declaring constructor member function in a program?

41) In a copy constructor, is it necessary for existing instance to be passed into the function by reference.

42) What is Copy Constructor? Describe merits and demerits of it.

43) Explain different types of constructor with example

44) Define a class to represent complex numbers. Overload operator + as friend to add 2 objects of that class. Also write main() to test this function. Be sure to write other necessary member function including constructor and destructor.

45) Write a C++ program for a class Integer which contains an integer as a data member, overload the ! Operator to find factorial of an integer. Write necessary constructor and member functions.

46) Explain pointers with suitable example.

47) Explain "this" pointer in C++. What are the applications of "this pointer?

48) Write a C++ program using operator overloading to check whether given number is prime or not.

49) Explain operator overloading of an assignment operator.

50) Create a class STRING to overload +-(concatenation) and ==(equality) to manipulate strings.

51) What is operator overloading? Why is it necessary to overload an operator?

52) What is Abstract class?

53) What do you mean by virtual destructor? Explain with example.

54) What do you mean by protected access specifier? Explain protected derivation in detail.

55) What do you mean by virtual base class and abstract base class? Explain with example.

56) What is virtual function? Why do we need virtual Function? When do we make a function pure virtual Function?

57) Write a short note on Constructor in derived class.

58) What do you mean by Inheritance in OOPS? Explain different types of inheritance in C++.

59) Write a short note on Virtual Base Class

60) Write a short note on Pure Virtual Function.

61) Explain Containership? How does it differ from Inheritance?

62) Explain the following give syntax rules.

1. Public Inheritance 2.Private 3. Protected Inheritance

63) Explain different forms of Inheritance.

64) Explain how to open the files in C++? Describe the various files opening modes.

65) Write a C++ program to remove all comments from a C file taken as input from user.

66) Write a C++ program to copy one file into another after deleting white spaces.

67) Write a C++ program to copy one "C" file into another after deleting comments of one file.

68) Explain 1.tellg() 2.tellp() 3.seekp() 4.seekg()

69) What is template? Explain with example. What are the advantages of Template?

70) What is an Exception? Explain try and catch block.

71) Write a program to accept two numbers and perform basic arithmetic operation on it. Handle the exception like Zero_Divide_Error

72) Explain various classes available for file stream operation

73) Write a program in C++ to count no. of character, words in "sam.txt" file

74) State difference between seekg() and seekp() function

75) Write a C++ program to copy the content two files into third file.

76) What is file? Explain the various filestream classes needed for a file manipulation.

77) Write a C++ program which takes a file as input andfrom user and changes every case of every alphabet within the file.

78) Write a C++ program to read a file and count the no. of vowels and consonants.

79) Write a program in C++ to generate following output

```
                1
            1   2   1
        1   3   3   1
    1   4   6   4   1
```

80) State advantages of Object Programming over Procedure oriented programming.

81) What is Class Template? Explain Syntax of class Template with suitable example.

82) What is Function Template

83) Give the syntax of create an object of template classes.

84) Using a generic function. Write a C++ program to swap two integers or two float numbers.

85) Write a program which uses multiple catches.

86) What will happen if an exception is thrown for which there is no corresponding catch statement.

87) Explain significance of:

Throw, catch, try, catch(...)