

8. _____ classes cannot be instantiated.
9. Which of the following is not the member of class?
 - a) Static function
 - b) Friend function
 - c) Const function
 - d) Virtual function
10. A _____ is a pointer that points to invalid data or to data which is not valid anymore

PART B (10 x 2 = 20 Marks)
(Not more than 40 words)

11. Distinguish between static and dynamic binding.
12. Identify some situations where inline expansion may not work.
13. List down the significance of public, private and protected access specifiers.
14. What is “this pointer”? Explain its use.
15. Define polymorphism
16. What is an abstract class? Give an example
17. Distinguish between function overloading and function overriding.
18. Outline any two rules for virtual functions.
19. What is the use of seekg() and tellp() functions?
20. What are manipulators?

PART C (5 x 14 = 70 Marks)
(Not more than 400 words)

Q.No. 21 is Compulsory

21. Write a C++ program to compute the age of the person, when date_of_birth and current_date is given as inputs. (Use operator overloading).
22. a) Explain the various elements of object oriented programming in detail.

(OR)

- b) Develop a program for processing admission report. Use a structure which has elements such as name, rollno, date_of_birth(nested structure), department. The format of report is as follows:

Roll No.	Name	Date of Birth	Department
xx	xxxxxxxxxx	dd/mm/yy	xxx

23. a) What are friend functions and friend classes? Write a normal function

which adds objects of the complex number class. Declare this normal function as friend of the complex class.

(OR)

b) (i) Illustrate the difference between auto and static storage class data members. Can static member functions of a class access all types of members of a class? Give reasons. (7)

(ii) Write a program to add carpet area of rooms available at home. There are 3 rooms of size 10x10 feet, 10x16 feet & 20x20 feet. Use operator overloading. (7)

24. a) Consider an example of book shop which sells books and video tapes. It is modeled by book and tape classes. These two classes are inherited from the base class called media. The media class has common data members such as title and publication. The book class has data members for storing a number of pages in a book and tape class has the playing time in a tape. Each class will have the member functions such as read() and show(). In a base class, these members have to be defined as virtual functions. Build a program which models this class hierarchy and processes their objects using pointers to the base class only.

(OR)

b) i) Write a program to sort N items in ascending order using class template. (10)

ii) What are pure virtual functions? Give an example. (4)

25. a) Write a program to get a paragraph of text as input from the keyboard & write it to a file. Also count the total number of number characters, words, spaces, consonants and vowels in file.

(OR)

b) Explain the exception handling model of C++ with various constructs supported by it.
