

Assignment 4

Q.A. Answer the following questions in one or two lines :

1. Which header file is used for manipulators?
2. Give the use and syntax for precision.
3. Which manipulator is used to change the field width for display ?
4. What will be the output of the following code segment –

```
cout.fill('>');  
cout.width(10);  
Ccout.precision(3);  
cout<<3.14159;
```
5. Define manipulator.
6. What will be the output of the following code –

```
cout<<setw(10)<<15<<setbase(16)<<15;
```
7. What will be the output of the following code –

```
cout<< setbase(8)<<15;
```
8. Explain the ways of opening a file in C++.
9. Which functions are used to read and write characters to a file ?
10. List and explain error handling functions during file operations.
11. List the functions for manipulation of file pointer.
12. Write the use of put() and write() with the help of syntax.
13. List any four file opening modes.
14. What is the use of get and put pointers ?
15. Write meaning of ios::trunk file mode parameter.
16. Which flag should be used to open a binary file for writing only, if file does not exists?
17. Give any two ways to check the success or failure of a file open operation.
18. What is the difference between using get() and getline() for reading a string of characters?
19. Write the C++ statements to open output file “a.txt” for appending.
20. Write one advantage of using Templates.
21. Write the syntax for template class.
22. A Template class can be generic. (True/False).
23. What is generic programming.
24. Give one advantage of class template.
25. Give the syntax for defining member function template.
26. State one advantage of Generic function.
27. What does catch(...) mean?
28. Explain different ways of using the throw keyword.
29. What is an Exception.
30. An exception can be thrown again after catching it. State true/false.

O.B. Answer the following questions :

1. Write a C++ program to accept student record (studid,sname,marks of 3 subjects). Calculate percentage and display the result using appropriate manipulator. Use array of objects.
2. With general form , explain the following : i) getline() ii) read()
3. Write a C++ program to merge two files into one file.
4. Write a C++ program to change the case of every alphabet of a text file.
5. Write a C++ program to read a file and to
 - a. Display content of a file on the screen
 - b. Display number of characters
 - c. Display number of lines
6. Write a C++ program to accept data from a user till a character '#' is pressed. Write the data to a file 'output.txt'. Also display the contents of a file.
7. Write a C++ program that reads a text file and creates another file that is identical except that every sequence of consecutive blank spaces is replaced by a single space.
8. Write a C++ program to read character data from a file. Create one file to store capital alphabets and another file to store all small case alphabets. Also display the contents of both files.
9. A file 'student.txt' contains roll numbers and names. Write a C++ program to read the contents of this file and search for a student having a specific roll number.
10. Write the syntax for a function template. Give one example for it.
11. Write a program to create a vector class template to add , delete and display values from vector.
12. Explain the concept of function overloading with suitable examples . Also state the difference between function overloading and function template.
13. Write function template for bubble sort to sort the elements of any data type.
14. What is class template with multiple parameters. Explain with suitable example.
15. List the features of generic function.
16. What is Exception Handling ? Explain try , catch and throw constructs in C++.
