**C++ PRACTICAL QUESTIONS**

**MCA-II**

Q. Write a function which removes all repetitions of characters from a string. Call the function in the main program.

Q. Demonstrate “return by reference” with an example.

1. Define an inline function which returns non-zero value when its argument is a letter and zero otherwise.
2. WAP that uses a function to check whether a given number is divisible by another number or not. However, if the second number is missing, the function checks whether the given number is prime or not.
3. WAP using function overloading for subtracting two given integer matrices, two floating point number matrices and double precision value matrices separately.
4. Write a function power() to raise a number m to a power n. The function takes a double value for m and int value for n, and returns the result correctly. Use a default value of 2 for n to make the function to calculate squares when this argument is omitted. Write a main that gets the value of m and n from the user to test the function.
5. Demonstrate the parameterized and copy constructor.

Q. WAP to implement a stack class for stack of ints. Include a default constructor, a destructor and usual stack operation: Push ( ), POP ( ), isempty ( ) and isfull ( ). Use an array implementation.

Q. Write a program to generate a series of Fibonacci numbers using a copy constructor where the copy constructor is defined out of the class declaration using scope resolution operator.

Q Define a class to represent a bank client data. Write member functions to assign initial values, to deposit an amount, to withdraw an amount after checking the balance and to display name and address. Write a main program to test the program.

Q. Demonstrate “this” pointer.

Q. Demonstrate Virtual functions.

Q.Write a program to give special meaning to ++ operator (overload both pre and post with different functionality).

Q.Write a program to add, subtract, multiply and divide two complex numbers by overloading arithmetic assignment operators.

Q.Write a program to compare two strings by overloading >, < and == operators.

Q.Overload operators using friend (>>, <<).

Q.Write a program to perform arithmetic operations using +=, -= operation using operator overloading.

Q.WAP to overload [ ] operator.

Q.Demonstrate inheritance and also demonstrate how we can make a class as abstract class.

Q.WAP to demonstrate the complete conversion between objects of two different classes. Use example of radians.

Q. WAP of virtual destructor.

Q. WAP to use static data member to keep track of count of object created and destroyed.

Q.WAP to create a file of objects and display the objects stored. (class bill- billno, billamount)

Q. Write a program to read data from one file and display on the console. Also calculate the length of the file.

Q. Write a program open two file in read mode and write the data from both the files in the third file.

Q. WAP to find maximum of two data items using Function Template.

Q. WAP to enter an integer and float array each of size 10 and arrange them inascending order of their values using template function.

Q. WAP of stack using template Write a Stack Class. Create the Stack using different option, Empty Stack, Stack with one item and stack with multiple items. Write the function to add and delete item in the stack. Verify if the Stack is full or

empty at the time of addition and deletion of items.

Q. WAP of singly link list using template Implement a **Linked List** Class write the function to Insert and Delete the node at the provided position. Inherit the Linked List Class in Stack Class using Private Inheritance and use the function Insert and Delete Node of the Linked List class to implement the Push and Pop Functionality of Stack class.

Q. WAP of Doubly link list using template.

Q. WAP of Binary Search tree using template. Write C++ code to perform following operations on Binary Search Trees:

i) Addition of a node

ii) Deletion of a node

iii) Traversal

a) Pre-order

b) In-order

c) Post-order

Q. WAP of BFS using STL functions.

Q. WAP of DFS using STL functions.

Q Write a program using STL to

a) Create a vector

b) Store the information in the vectors using push\_back function

c) Sort the information in the vectors