

SN	Question	Checked by																									
1	Write a C++ Program to print the following using cout and manipulators (endl, left, right, setw)																										
	<table><tr><td>S.No.</td><td>City</td><td>District</td><td>Province</td><td>Population</td></tr><tr><td>1.</td><td>KATHMANDU</td><td>Kathmandu</td><td>Bagmati</td><td>500000</td></tr><tr><td>2.</td><td>Pokhara</td><td>Kaski</td><td>Gandaki</td><td>50000</td></tr><tr><td>3.</td><td>Butwal</td><td>Rupendehi</td><td>Lumbini</td><td>100000</td></tr><tr><td>4.</td><td>Dharan</td><td>Sunsari</td><td>Prov 1</td><td>80000</td></tr></table>		S.No.	City	District	Province	Population	1.	KATHMANDU	Kathmandu	Bagmati	500000	2.	Pokhara	Kaski	Gandaki	50000	3.	Butwal	Rupendehi	Lumbini	100000	4.	Dharan	Sunsari	Prov 1	80000
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2	Write a Program defining an inline function to compute the area of circle with radius as input.																										
3	Write a program to get input a string and print the string and its reverse. Define your own function to reverse the string in your program.																										
4	Write a program overloading function sort() to sort an array of integers, characters as well as floating point numbers(Use any sorting algorithm).																										
5	Write a program that uses a structure Distance with data members meter and centimeter. Add functions in structure to take input and output as well as the function to add the two variables of Distance and return the sum. Your program should display the result.																										
6	Write program with objects as function(to add time) argument by passing by value, passing by address and passing by reference defining a class Time with data member hour, minute, second as integers. Write member functions to read the data for objects and to show the value of objects of Time.																										
7	Define a friend function addTime() with objects as arguments and return the sum of two objects. Show the values of each object and their sum as output.																										
8	Write different programs to implement passing by reference and passing by value in C++.																										
9	Write different programs to implement different storage classes (auto, register, extern and static) in C++ with its output.																										
10	Write a C++ program to illustrate dynamic allocation and de-allocation of memory using new and delete.																										
11	Write a program using dynamic memory allocation to get input an array of numbers and find the sum of N numbers stored in the array using a function to compute the sum.																										
12	Write a program to implement user defined constructor and copy constructor.																										
13	Write a program to illustrate constructor overloading in C++.																										
INHERITENCE																											
1	Write a C++ program to add two numbers using single inheritance. Accept these two numbers from the user in base class and display the sum of these two numbers in derived class.																										
2	Write a C++ program to calculate the percentage of a student using multi-level inheritance. Accept the marks of three subjects in base class.																										

	A class will be derived from the above-mentioned class which includes a function to find the total marks obtained and another class derived from this class which calculates and displays the percentage of student.	
3	Write a C++ program to design a base class Person(name, address, phone). Derive a class Employee(eno, ename) from Person. Derive a class Manager(designation, dept_name, basic_salary) from Employee. Write a program to: a. Accept all details of 'n' managers b. Display manager having highest salary PROGRAM	
4	Write a C++ program to define a base class Item (item-no, name, price). Derive a class Discounted-Item (discount-percent). A customer purchases 'n' items. Display the item-wise bill and total amount using appropriate format.	
5	Imagine in a college hires some lectures. Some lectures are paid in period basic, while others are paid in month basic. Create a class called lecture that stores ID and name of lectures. From this class derive two classes: part time, which adds payperhr (type float); and full time, which adds pay per month (type float). Each of these three classes should have a readdata () function to gate its data from user at the key board and printdata () function to display the data. Write a main ()program to test the Full time and part time classes by creating instance of them, asking the user to fill third data with readdate () and display the data with printdata().	
POLYMORPHISM		
1	Write a program to illustrate virtual function by creating a class shape with functions to find the area of the shapes and display the names of the shapes and other essential components of the class. Create derived classes circle, rectangle, and trapezoid each having overriding functions area() and display().	
2	Write a program with an abstract class Student and create derive classes Engineering, Medicine and Science from base class Student. Create the objects of the derived classes and process them and access them using an array of pointers of type base class Student.	
3	1. Demonstrate Deletion of Child Object using Base Class Pointer without using a Virtual Destructor.	
4	2. Demonstrate Deletion of Child Object using Base Class Pointer using a Virtual Destructor.	
5	3. Create a polymorphic class Vehicle and create other derived classes Bus, Car, and Bike from Vehicle. Illustrate RTTI by the use of dynamic_cast and typeid operators in this program.	