Government Girls' Polytechnic, Bilaspur
Class**:** CS 3rd sem , IT- 3rd sem
Name of the Lab: **Programming Lab**
Title of the Practical   : **OOPS in C ++ Lab**

Teachers Assessment 30   End Semester Examination :70

List of Experiments

1. Program showing the use of data type and basics of C++: **(a)** Program to calculate sum of two numbers. **(b)** Program to calculate simple interest.
2. Program showing C++ programs based on object and classes: **(a)** Program showing arrays within a class. **(b)** Program containing arrays of object.
3. At least one Ç++ program based on the following : **(a)** Constructors and destructors-Program to generate a series of Fibonacci numbers using constructor and destructor. **(b)** Overloading unary operator-Program to generate a Fibonacci series by overloading a postfix operator. **(c)** Overloading binary operator- Program to perform overloading of a plus operator for finding the sum of two given class objects.
4. C++ program based on the following : **(a)**Inheritance- Program to demonstrate how ambiguity is avoided in single inheritance using scope resolution operator.**(b)** Multiple Inheritance- Program to demonstrate how ambiguity is avoided in multiple inheritance using scope resolution operator.
5. One C++ program based on the following: **(a)**Polymorphism-Program to illustrate the dynamic binding of member function of a class. **(b)** Overloading- Program to illustrate function overloading. **(c)**Overriding-Program to show method overriding.
6. Some C++ program should be conducted on each of the following: **(a)** 2d array sorting-Program to sort 2D array using linear representation of the array **(b)** String manipulation-Program shows how to create a string that contains the full name from first name and last name (e.g., firstname = "John", lastname = "Smith", fullname = "Smith, John"): **(c)** Pointer to objects – Program to illustrate the use of pointer to objects.**(d)** Use of this Pointer- Program to illustrate the use of this pointer. **(e)** Pointers to derived class- Program to illustrate the use of pointers to derived class
7. At least two program based on file handling: **(a)**Program using getline() and write() functions **(b)** Program showing read and write operations.
8. At least four Ç++ programs based on Graphics function :**(a)** Progarm to draw a line.**(b)** Program to draw a circle.**(c)** Program to draw a rectangle. **(d)** Program to draw a polygon.