**Final Term Exam**

**Write a C++ program of the following problems on your compiler and show their outputs.**

1. Create a class with a function that prints "This is parent class" and its subclass with another function that prints "This is child class". Now, create an object for each class and call
2. function of the parent class by the object of the parent class
3. function of the child class by the object of the child class
4. function of the parent class by the object of the child class
5. Create a class named 'Rectangle' with two data members 'length' and 'breadth' and two functions to print the area and perimeter of the rectangle respectively. Its constructor having parameters for length and breadth is used to initialize the length and breadth of the rectangle. Let class 'Square' inherit the 'Rectangle' class with its constructor having a parameter for its side (suppose s) calling the constructor of its parent class. Print the area and perimeter of a rectangle and a square.
6. Write a program to print the names of students by creating a Student class. If no name is passed while creating an object of the Student class, then the name should be

"Unknown", otherwise the name should be equal to the String value passed while creating the object of the Student class.

1. Write a program by creating an 'Employee' class having the following functions and print the final salary.
   1. 'getInfo()' which takes the salary, number of hours of work per day of employee as parameters
   2. 'AddSal()' which adds $10 to the salary of the employee if it is less than $500.
   3. 'AddWork()' which adds $5 to the salary of the employee if the number of hours of work per day is more than 6 hours.
2. Write a program to print the area of a rectangle by creating a class named 'Area' having two methods. First method named as 'setDim' takes length and breadth of rectangle as parameters and the second method named as 'getArea' returns the area of the rectangle. Length and breadth of rectangle are entered through keyboard.
3. Create a class 'Degree' having a function 'getDegree' that prints "I got a degree". It has two subclasses namely 'Undergraduate' and 'Postgraduate' each having a function with the same name that prints "I am an Undergraduate" and "I am a Postgraduate" respectively. Call the function by creating an object of each of the three classes.