BCA 271 Practical C++

Practical Assignment I- Classes & Objects, Constructors and Destructors

Instructions:

- All questions are compulsory.
- Print should be taken only on one side of the page
- Output should be taken with black print on white background
- Prints must be taken using notepad, notepad++ or any text editor **but not using MS-Word** or any word processor.
- Every print must bear the date and time of printing in footer section
- Before starting every program, create a comment section and write your name, enrolment number and problem statement. A sample is given as follows:

```
/*
Programmer name : xxxxxxxxxxxxx
Enrolment number: 6878787878787
Problem : Write a program to demonstrate use of multiple catch……
Date:
*/
```

No	Practical	CO
1	WAP and demonstrate the use of reference variable in calling by function by reference	CO1
2	WAP and demonstrate call to overloaded functions	CO3
3	WAP to implement '*Inline function'*	CO1
4	Create a class employee which have name, age and address of employee, include functions getdata() and showdata(), getdata() takes the input from the user, showdata() display the data in following format: Name: Age: Address:	CO2
5	WAP to store student roll_no, name, marks in 5 subjects, total marks and percentage for 5 students. a. Include a function to take roll_no, name and marks from user using input function. b. Include a function to display all the details of a student. c. Include a calculate() function in private area to calculate total_marks and percentage. Let the input function invoke this function.	CO2
6	Write a class called CAccount which contains two private data elements, an integer accountNumber and a floating point accountBalance, and three member functions: • A constructor that allows the user to set initial values for accountNumber and accountBalance and a default constructor that prompts for the input of the values for the above data numbers. • A function called inputTransaction, which reads a character value for transactionType('D' for deposit and 'W' for withdrawal), and a floating point value for transactionAmount, which updates accountBalance. A	CO2

	function called printBalance, which prints on the screen the accountNumber and accountBalance.	
7	WAP to implement Parameterized Constructor, Copy Constructor and Destructor	CO2
8	Define a class Counter which contains an int variable count defined as static and a static function Display () to display the value of count. Whenever an object of this class is created count is incremented by 1. Use this class in main to create multiple objects of this class and display value of count each time	CO2
9	Write a class student with rollno, name and age as data members. Include following in the class: a. Input and output functions b. Default constructor which initializes rollno and age to zero and name to "NA". c. A parameterized constructor. d. A copy constructor e. A Destructor	CO2
10	Write a class String. It must have constructors which allow definition of objects in the following form: 1. String name1; 2. String name2="Lowe"; 3. String name3=name2;	CO3
11	WAP to add and subtract two complex numbers using classes	CO2
12	Write a program for adding two vectors (which are objects of a class Vector). Use dynamic data members instead of arrays to store a vector. Write a function which adds two vectors passed as parameters. Declare this function as friend to the vector class	CO3
13	Create a class which keep track of number of instances. Use static data members, constructors and destructors to maintain updated information about active objects	CO2
14	WAP to show the implementation of 'containership'	CO2
15	Declare two classes named 'window' and 'door' having attributes like height and width. Show a 'has-a' relationship while creating a new class called 'house' which may contain some doors and windows depending upon users choice. Also specify desired number of constructors and destructors, static members and friend members	CO2