**FYBCA**

**SEMESTER – II**

**BCA1211C08 : Object Oriented Programming**

**Date : 24/01/2023**

1. Define a Circle class allowing to create a circleC (O, r) with center O(a, b) and radius r using the constructor:

def \_\_init\_\_(self,a,b,r):

self.a = a

self.b = b

self.r = r

i) Define a Area() method of the class which calculates the area of ​​the circle.  
 ii) Define a Perimeter() method of the class which allows you to calculate the perimeter of the circle.  
 iii) Define a testBelongs() method of the class which allows to test whether a point A(x, y) belongs to the circle C(O, r) or not.

1. Create a  Computation class  with a default constructor (without parameters) allowing to perform various calculations on integer numbers.
2. Create a method called Sum() allowing to calculate the sum of the first n integers 1 + 2 + 3 + .. + n. Test this method.
3. Create a method called Factorial() which allows to calculate the factorial of an integer. Test the method by instantiating the class.
4. Define a Book class with the following attributes: Title, Author (Full name), Price.
   1. Define a constructor used to initialize the attributes of the method with values entered by the user.
   2. Set the View() method to display information for the current book.
   3. Write a program to testing the Book class.
5. Create a tableMult() method which creates and displays the multiplication table of a given integer. Then create an allTablesMult() method to display all the integer multiplication tables 1, 2, 3, ..., 9.
6. Write a Python class to implement pow(x, n).