ADMISSION NUMBER

School of Biomedical Science

B.Tech Biotechnology
Semester End Examination - Jun 2024

Duration : 180 Minutes
Max Marks : 100

Sem II - E2UC201C - OOPS

General Instructions
Answer to the specific question asked
Draw neat, labelled diagrams wherever necessary
Approved data hand books are allowed subject to verification by the Invigilator

1) Examine the outputs for the following operations for given list1= [2,3,5,6] and list2=[7,8,9,7], (a) list1+list2 and (b) list1*2. K1 (2)

2) What is a base class? Explain with piece of python code. K2 (4)

3) Discuss the key features of a Color Picker and its application in enhancing Tkinter interfaces. K2 (6)

4) Implement an abstract class Vehicle with an abstract method drive(). Derive classes Car and Motorcycle from Vehicle and implement the drive() method to print driving actions for each vehicle. K3 (9)

5) How does the pack() geometry manager work? K3 (9)

6) Create a class Employee that keeps a track of the number of employees in the organization,total no of leaves of employees and also store their name,designation and salary details. Create a method named display_count which print the Total no of employees in the organization.Create a method named display_details which print the Employee's informations(name,desiganation,salary,no_of leave K5 (10)

7) Define a class hierarchy A, B, and C where C inherits from B and B inherits from A. Implement a method in each class and demonstrate the use of the super() method to access methods from the base class. K4 (12)

8) Scenario: You are developing an Online Examination System for a university. Create a class hierarchy to represent different types of exams such as multiple-choice exams, essay exams, and practical exams. Implement methods for conducting exams, grading answers, and generating result reports. Handle exceptions such as incomplete submissions or cheating detection. K5 (15)

9) Implement a complex Tkinter GUI application, incorporating buttons, canvas, and advanced widget functionalities. K5 (15)

10) Write a Python GUI application for computing loan payments. K6 (18)
The code should consist of the following steps:
1.Design the user interface consisting of labels using Label( ), text entry boxes using Entry( ), and a button using Button( ).
2.Process the event. When the button is clicked, the program invokes a callback functions, using getMonthlyPayment( ) to obtain the user input for the interest rate, number of years, and loan amount from the text entries. The monthly and total payments are computed using computePayment( ) and displayed in the labels.