NOTE:(1) All Questions are Compulsory.
       (2) Figures to the right indicate marks.
       (3) Answers to the same question must be written together.

Q.1)Attempt the following.(Any 3)   [15 Marks]

1. What is Python? Explain Features of Python.
2. Explain Debugging and Error types in Python.
3. What is Variable?Explain any 5 keywords with Example.
4. Explain Arithmetic Operators in Python with suitable Example.
5. Explain IF-ELSE And Nested IF-else statement with suitable example.
6. Write a python program to generate Fibonacci Series.

Q.2)Attempt the following.(Any 3)   [Marks 15]

1. What is Function? Write syntax to define function. Give an example of function definition.
2. Explain any five basic operations performed on String.
3. What is import ? Explain ways of importing in python.
4. What is a recursive function? Write a program to calculate Factorial using a recursive function.
5 a). Explain String Slice.
   b) Write the output for the following if the variable Fruit='banana':
       >>>Fruit[:3]
       >>>Fruit[3:]
       >>>Fruit[1:3]
       >>>Fruit[::-1]
   c) Write the output of the following program.
       S="Python"
       print(st)
       print("S[:5]",S[:5])
       print("S[3:]",S[3:])
       print("S[2:5]",S[2:5])

6) Explain the following String function with Example.
   1.len(String)   2.Max(str)   3.Min(str)   4.upper()   5.lower()

Q.3)Attempt the following.(Any 3).   [Marks 15]

1. What are Lists? Explain any 5 methods of list.
2. How to create,access and delete the values of a dictionary ? Give an example.
3. Explain the following file methods with example.
    a. f.read() b. f.readline() c. f.write()
4. Explain basic tuple operations.
5. Explain *try..except* blocks for exception handling in python with example.
6. Write a python script to concatenate the following dictionaries to create a new one.
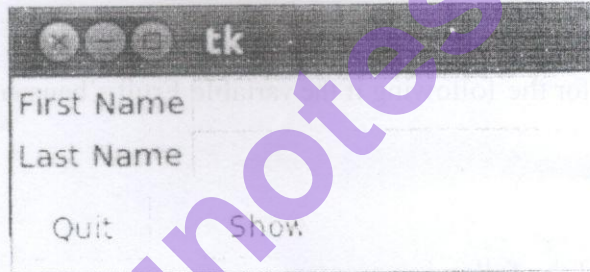   Sample Dictionary: dic1={1:10,2:20} dic2={3:30,4:40} dic3={5:50,6:60}
       Expected Result:{1:10, 2:20 ,3:30, 4:40 ,5:50. 6:60}.

Q.4)Attempt the following.(Any 3) [Marks 15]

1. What is a regular expression?What are different types of regular expressions?
2.Explain Random module.
3. Explain math module with its any 5 functions.Give example.
4. Explain and write a short program to demonstrate use of inheritance.
5. Design a class that stores the information of students and displays the same.
6. What is the Constructor? How to define and use the constructor with suitable example.

Q.5) Attempt the following.(Any 3) [Marks 15]

1. What is a Layout manager? Explain pack() method.
2. Explain Button widget in python.with Example.
3. What is the use of listbox widget?Give an example to add an element to listbox.
4. Write a Small program to create and insert values in MySQL database using python GUI application.
5. Write A python code to create the following GUI.

First Name
Last Name
Quit   Show

6.Explain Bitmaps widget.Write a program to use "error", "hourglass", "info", "question", "warning" bitmaps.

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