Roll No. : ……

Bharati Vidyapeeth's

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SECOND SEMESTER [MCA] Reappear Examination, May 2024

Paper Code: MCA 106	**Subject: Python Programming**

Time: 2 Hours **Maximum Marks: 60**

Note: Attempt THREE questions in all. Question No. 1 is compulsory, and attempt one question from each unit.

1. Answer all the following questions briefly: - 2.5 × 10 = 25

   (a) Differentiate between break and continue statement with example.

   (b) Compare and contrast packages with composition.

   (c) Create a simple phone book program that stores names and phone numbers in a dictionary

   (d) List the differences between set and frozen set.

   (e) Illustrate the life cycle of a thread.

   (f) Explain the significance of finally block in exception handling.

   (g) Articulate the concept of polymorphism relating python programming with real-world application.

   (h) Explain map() and zip() function with example.

   (i) Justify the purpose of *kwargs parameters

   (j) Discuss grid() method of Tkinter.

UNIT-I

2. (a) Write a Python program to find roots of a quadratic equation. **5**

   (b) Articulate concept of scope and lifetime of variables in Python Programming language with help of an example. **5**

3. (a) Define short circuit evaluation performed by Python with help of an example. **5**

   (b) Demonstrate the working of following statements along with syntax and example 5
   i) for loop
   ii) while loop

UNIT - II

4. (a) Explain the significance of a Dictionary in Python Programming language. **5**
   Write four methods available in the dictionary along with example.

	(b)	Write a program to copy odd number of lines from one file to another.	**5**
5.	(a)	Demonstrate a program to sort a list without using built-in function.	5
	(b)	Evaluate the purpose of using strings in python and explain few methods with example.	5

UNIT-III

6.	(a)	Discuss Synchronization using locks and semaphores with example.	5
	(b)	Demonstrate the concept of multiple inheritance through a program.	5
7.	(a)	Write a program to overload addition operator in python.	5
	(b)	Create a class to find cube of a number entered by the user. Throw an exception if string is given as input by user.	5

UNIT-IV

8.	(a)	With help of a python script, plot a bar chart using seaborn library for number of boys and girls present in a class.	5
	(b)	Mention two ways of creating a 2-D array. Explain 5 functions that can be performed on 2-D array with help of an example.	5
9.	(a)	Create a radio button, check box, and drop-down menu using Tkinter library.	5
	(b)	Explain the process of database connectivity in Python.	5