GUJARAT TECHNOLOGICAL UNIVERSITY
M.SC(IT)- INTEGRATED – SEMESTER V- EXAMINATION –WINTER-2024

Subject Code:1350505 **Date: 29/11/2024**
Subject Name: Python Programming-1
Time:10:30 AM TO 01:00 PM **Total Marks: 70**
Instructions:

1. Attempt all questions.
2. Make Suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Use of simple calculators and non-programmable scientific calculators are permitted.

			Marks
Q.1	**(a)**	What is the difference between compiler and interpreter?Explain How python interpreter works.	**03**

	(b)	Differentiate the the following
		   i) list and dictionary data types
		   ii) append() and insert() methods of list
			04

	(c)	Write a short note on data types in Python.	**07**
Q.2	**(a)**	Give the difference between C and Python	**03**
	(b)	Differentiate between the following: 1. pop() and remove() methods of list. 2. Del statement and pop() method of list.	**04**
	(c)	Explain while loop & for loop with syntax and example in detail.	**07**

OR

	(c)	Provide List of Assignment and Comparison Operators with its description.	**07**
Q.3	**(a)**	Differentiate between the following. 1. isidintifier() and isnumeric() 2. split() and splitlines()	**03**
	(b)	Write a program to get the file size of a plain text file.	**04**
	(c)	Write a program to take an input N and print Fibonacci sequence till N terms.	**07**

OR

Q.3	**(a)**	Differentiate between local and global variables with suitable examples.	**03**
	(b)	Explain the different file mode operations with examples.	**04**
	(c)	Write a program that creates a list of 10 random integers. Then create two lists by name odd_list and even_list that have all odd and even values of the list respectively.	**07**
Q.4	**(a)**	Define the abstraction and use of it.	**03**
	(b)	What is Inheritance? Explain types of inheritance.	**04**
	(c)	If the age of Ram, Sam, and Khan are input through the keyboard, write a python program to determine the eldest and youngest of the three.	**07**

OR

Q.4	**(a)**	What is exception handling?	**03**
	(b)	Explain lambda function.	**04**
	(c)	Write a Python program to Swapping of two numbers with and without using temporary variable.	**07**

Q.5	(a)	Write a Python program to print first 10 prime number	03
	(b)	Differentiate between Black Box and Glass Box testing.	04
	(c)	Explain Binary Search with an example.	07

OR

Q.5	(a)	Write a python program to to find sum of natural numbers.	03
	(b)	What is Encapsulation?Explain in detail.	04
	(c)	Explain briefly about the Multi-Valued Data types with example.	07

****