GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–V EXAMINATION – SUMMER 2025

Subject Code:3150312   **Date:13-05-2025**

Subject Name:Python Programming for Biomedical Engineers

Time:02:30 PM TO 05:00 PM   **Total Marks:70**

Instructions:
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Simple and non-programmable scientific calculators are allowed.**

			MARKS
Q.1	**(a)**	Define Python. Give the features of python.	03
	(b)	What is a variable? What are the rules for naming a variable?	04
	(c)	What operators does python support? Explain any two operators in detail.	07
Q.2	**(a)**	What are keywords?	03
	(b)	What are the rules for writing an identifier?	04
	(c)	Explain while loop & for loop with syntax and example in detail.	07
		OR	
	(c)	Write a program to perform Arithmetic operations (Addition, Subtraction, Multiplication, and Division) on integers. Input the two integer values and operator for performing arithmetic operation through keyboard.	07
Q.3	**(a)**	What is a function? Mention the type of function and use.	03
	(b)	Write a program to convert Celsius to Fahrenheit.	04
	(c)	Write a python program to find the given number is odd or even.	07
		OR	
Q.3	**(a)**	"List is mutable." - Justify with suitable example.	03
	(b)	What is tuple? What is the difference between list and tuple?	04
	(c)	Describe set and explain its operations with suitable examples.	07
Q.4	**(a)**	Explain how to create a dictionary in python?	03
	(b)	Explain what is range () function and how it is used in lists?	04
	(c)	Describe the built-in functions with Tuples and write a program to use Max (), Min () and sorted () methods in Tuple	07
		OR	
Q.4	**(a)**	Differentiate between the tuple and sets in python.	03
	(b)	Explain *args and **kwargs for functions.	04
	(c)	What is dictionary in Python? Explain any four built-in dictionary methods with example.	07
Q.5	**(a)**	Write a program to write a data in a file for both write and append modes.	03
	(b)	Write a python program to read line by line from a given files file1 & file2 and write into file3.	04
	(c)	Create a program to determine whether a string is a palindrome or not.	07
		OR	
Q.5	**(a)**	Differentiate global and local variables.	03
	(b)	Explain the role of Pandas library with the help of examples.	04
	(c)	Explain graphing methods in python.	07

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