

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-V (NEW) EXAMINATION – WINTER 2024****Subject Code:3150312****Date:25-11-2024****Subject Name:Python Programming for Biomedical Engineers****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. Simple and non-programmable scientific calculators are allowed.

		Marks
Q.1	(a) What is a variable? What are the rules to define a variable name?	03
	(b) Explain the features of Python Programming Language. What are the thrust areas of Python?	04
	(c) Enlist different python operators and explain them with an example.	07
Q.2	(a) Briefly explain Type conversion in Python with examples.	03
	(b) Write a program to read two integers and perform arithmetic operations on them (addition, subtraction, multiplication, and division).	04
	(c) Write a program to convert temperature from centigrade (read it as float value) to Fahrenheit.	07
OR		
	(c) Explain various data types of python programming.	07
Q.3	(a) Define function. What are the advantages of using a function?	03
	(b) Explain while with proper example.	04
	(c) Explain following control flow statements with proper example: 1) if, 2) if..else 3) if..elif..else and 4) Nested if.	07
OR		
Q.3	(a) Explain del statement using proper examples.	03
	(b) Write a program that accepts a string from the user displays play the same string after removing vowels from it.	04
	(c) Explain relations between 1) tuples and lists 2) tuples and dictionaries.	07
Q.4	(a) Explain the use of zip () function with examples.	03
	(b) Write a program to concatenate two strings into another string without using the + operator.	04
	(c) Enlist set methods. Explain them with an example.	07
OR		
Q.4	(a) Enlist different methods to create dictionary.	03
	(b) Demonstrate indexing and slicing in tuples using proper example.	04
	(c) Write a program to unpack a tuple to several variables.	07
Q.5	(a) Enlist various methods to create tuples.	03
	(b) Explain reading and writing CSV Files with the help of example.	04
	(c) Enlist and explain the modes to access a file.	07

OR

- Q.5** (a) What are types of Files? Explain Creating and Reading Text Data with the help of example. **03**
- (b) Explain Line Graphs, Scatter Graph with the help of program. **04**
- (c) What is a role of Pandas library? List out the functions of Pandas library. **07**
