

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER- V EXAMINATION – SUMMER 2026****Subject Code:3154206****Date:10-06-2026****Subject Name: Python Programming****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) Explain the use of comments in python using example.	03
	(b) Write down different important features of python.	04
	(c) Write a program to explain the various operators involved in python and how an expression evaluated using precedence of operators.	07
Q.2	(a) Explain string slicing with example	03
	(b) Explain break, continue and pass statement with suitable example of each.	04
	(c) Write a python program to demonstrate the use of while and for loop.	07
	OR	
	(c) Write a python program to find whether the given number is armstrong or not.	07
Q.3	(a) Explain different ways to create list.	03
	(b) Write a python program to calculate frequency of each element in a tuple.	04
	(c) With the help of suitable example explain how can we read and write to a CSV file in python?	07
	OR	
Q.3	(a) What is tuple? Explain the advantages of tuple over list.	03
	(b) Differentiate the use of append() and extend() method in list with example.	04
	(c) Explain different mode for opening a file in python.	07
Q.4	(a) Write a program to swap two elements in the python list.	03
	(b) Write a program to add and remove key from dictionary in python.	04
	(c) Explain different ways to create a python dictionary.	07
	OR	
Q.4	(a) Write a program to find sum of array.	03
	(b) Explain handling of missing keys in dictionary using an example.	04
	(c) List various in-built dictionary functions and explain in detail.	07
Q.5	(a) Differentiate shallow copy and a deep copy in NumPy	03
	(b) What are the different ways to create a series in pandas	04
	(c) Explain step-by-step approach to build random forest classifier using the scikitlearn library	07
	OR	
Q.5	(a) Explain slicing and indexing approach to access array element in numpy.	03

- (b)** What are the different ways to create a dataframe in pandas. **04**
- (c)** Explain various function of matplotlib in python programming **07**