

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-V (NEW) EXAMINATION – WINTER 2024****Subject Code:3151108****Date:25-11-2024****Subject Name: Python Programming****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) List the advantage and disadvantage of python.	03
	(b) Differentiate between List and Tuple.	04
	(c) Demonstrate Membership operators and identity operators with suitable examples.	07
Q.2	(a) What are negative indexes and why are they used?	03
	(b) Write a python program to check if a string is palindrome or not.	04
	(c) Write a Python program to generate pyramid pattern as given below.	07
	<pre> * * * * * * * * * *</pre>	
OR		
	(c) Explain while loop in python. How to create infinite while loop? How to break infinite while loop in certain condition? Explain with example.	07
Q.3	(a) Write a Python function to sum all the numbers in a list.	03
	(b) Discuss global, local and nonlocal variable in detail.	04
	(c) Develop python program to find maximum, minimum and average of given numbers using user define function.	07
OR		
Q.3	(a) What is a function? Mention the type of function and use.	03
	(b) Describe with example: Module in python	04
	(c) Write a python function to convert string into upper case and find length of string. String will be passed to function.	07
Q.4	(a) Describe range function with example.	03
	(b) Enlist all file processing modes supported in Python.	04
	(c) What is an exception? Explain about the different types of Exceptions in Python	07
OR		
Q.4	(a) List and explain in brief different types of errors occurred in Python.	03
	(b) Develop python program to create csv file that contain five entries along with header (serial number, name, birth_date and city).	04
	(c) Explain the different methods available for manipulating the CSV files in python.	07
Q.5	(a) What is micro python? Discuss unique features of micro python.	03
	(b) List different features available in Node MCU 8266 controller.	04

- (c) Write MicroPython program to read proximity sensor connected at Pin1, blink the LED if sensing is detected. **07**

OR

- Q.5** (a) Enlist various IDE available to carry out programing in MicroPython. **03**
(b) Describe merits and demerits of Micropython over python. **04**
(c) Develop program in Micropython to send digital data on GPIO pin of Micropython supported board and blink LED connected to it. **07**
