

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V (NEW) EXAMINATION – WINTER 2021****Subject Code:3151108****Date:15/12/2021****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) Define Python? List the important features of python. | 03 | |
| | (b) What is tuple ? What is the difference between list and tuple? | 04 | |
| | (c) Write short note on different types of operators in python with appropriate example. | 07 | |
| Q.2 | (a) What is a function? Mention the type of function and use. | 03 | |
| | (b) What is len function and explain how it is used on strings with an example. | 04 | |
| | (c) What is Data Type? Explain various data types used in Python. | 07 | |
| OR | | | |
| Q.3 | (c) Write a python program to check if a string is palindrome or not. | 07 | |
| | (a) What is the use of str.upper() and str.lower() functions in string? | 03 | |
| | (b) What are Python's dictionaries? Explain how to create a dictionary in python? | 04 | |
| Q.3 | (c) Explain following List methods in python with appropriate example. a) append() b) insert() c) remove() d) clear() e) reverse() | 07 | |
| | OR | | |
| | (a) What is meant by module in python? . List some built in modules in python. | 03 | |
| Q.3 | (b) Explain break and continue statement in python? | 04 | |
| | (c) What is an exception? Explain about the different types of Exceptions in Python. | 07 | |
| | Q.4 | (a) Explain string comparison with an example. | 03 |
| (b) Which method is used to read the contents of a file which is already created? | | 04 | |
| (c) Write a program to enter a number in Python and print its octal and hexadecimal equivalent | | 07 | |
| OR | | | |
| Q.4 | (a) What are negative indexes and why are they used? | 03 | |
| | (b) What is the difference between == and is operator in Python? | 04 | |
| | (c) Write a python program to find the factorial of any number. | 07 | |
| Q.5 | (a) Write the syntax and usage of WHILE and FOR loop. | 03 | |
| | (b) Give difference between Micro Python and Python. | 04 | |
| | (c) Explain all file processing modes supported in Python. | 07 | |
| OR | | | |
| Q.5 | (a) What is micro python? Discuss unique features of micro python. | 03 | |
| | (b) How does del operation work on dictionaries? Give an example. | 04 | |
| | (c) Write program in MicroPython to send digital data on GPIO pins of NodeMCU and glow LED connected with NodeMCU or any other MicroPython supported board. | 07 | |