Enrollment No./Seat No.:

# GUJARAT TECHNOLOGICAL UNIVERSITY
## Bachelor of Vocation - SEMESTER - IV EXAMINATION - WINTER 2025

**Subject Code: 1140503**                                              **Date: 17-11-2025**

**Subject Name:  Python Programming**

**Time: 02:30 PM TO 04:30 PM**                                    **Total Marks: 50**

**Instructions**
**1. Attempt all questions.**
**2. Make Suitable assumptions wherever necessary.**
**3. Figures to the right indicate full marks.**
**4. Use of simple calculators and non-programmable scientific calculators are permitted.**

|      |      |                                                                                                                   | Marks |
|------|------|-------------------------------------------------------------------------------------------------------------------|-------|
| Q.1  | (a)  | Explain the following:<br>i) Keyword<br>ii) Identifier<br>iii) Variable<br>iv) write<br>v) Append                 | 05    |
|      | (b)  | List and explain different types of operators in Python with one example for each.                                | 05    |
| Q.2  | (a)  | Differentiate between for loop and while loop in Python. Provide one example for each to print numbers from 1 to 5. | 05    |
|      | (b)  | Write a Python program using if-elif-else to check whether a number is positive, negative, or zero.               | 05    |
|      |      | **OR**                                                                                                            |       |
|      | (b)  | Explain the use of break, continue, and pass statements in Python with appropriate examples.                      | 05    |
| Q.3  | (a)  | What is a dictionary in Python and how data is stored and accessed? Explain with example.                         | 05    |
|      | (b)  | What is set? Explain different operations with proper example.                                                    | 05    |
|      |      | **OR**                                                                                                            |       |
|      | (a)  | What is Recursion? Write a python program to find a factorial of 1 to 5 numbers.                                  | 05    |
|      | (b)  | Differentiate between a list and a tuple in Python with example.                                                  | 05    |
| Q.4  | (a)  | What is the purpose of the math module in Python? Provide examples of how to use the sqrt() and pow() functions.  | 05    |
|      | (b)  | Explain plotting functions in python with example.                                                               | 05    |
|      |      | **OR**                                                                                                            |       |
|      | (a)  | What is the use of string testing function? Explain islower(), isupper(), isalpha() function with suitable example. | 05    |
|      | (b)  | Explain basic string functions len(), min(), max() with each example.                                            | 05    |

**Q.5 (a)** What is string manipulation function? Explain lstrip() and rstrip() with example.  **05**

**(b)** What is the purpose of the open() function in Python? Explain the different modes to open the file with example.  **05**

**OR**

**(a)** What is the difference between the read() and readline() functions in Python? Demonstrate the answer with example.  **05**

**(b)** Write a python program to print current date, time, day and year using datetime module.  **05**

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