# GUJARAT TECHNOLOGICAL UNIVERSITY
## BE - SEMESTER–VIII(NEW) EXAMINATION – WINTER 2022

**Subject Code:2180711**                                    **Date:16-12-2022**

**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.**

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|---|---|---|---|
| **Q.1** | **(a)** | What is dictionary in Python? Explain any four built-in dictionary methods with example. | **03** |
| | **(b)** | What is Interpreter? Explain How python interpreter works. | **04** |
| | **(c)** | Write a Python program to count words, characters and spaces from text file. | **07** |
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| **Q.2** | **(a)** | How to comment specific line(s) in Python program? | **03** |
| | **(b)** | Describe following string functions with syntax: title() , strip(), islower(), isupper(). | **04** |
| | **(c)** | Write a python program to implement isPalindrome() function to check given string is palindrome or no. | **07** |

**OR**

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| | **(c)** | Write a python program to implement Student class which has method to calculate CGPA. Assume suitable class variables | **07** |
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| **Q.3** | **(a)** | Differentiate List and Tuple in Python. | **03** |
| | **(b)** | Give the output of following Python code:<br>myStr = 'GTU is the best University'<br>print myStr [15 : : 1]<br>print myStr [-10 : -1 : 2] | **04** |
| | **(c)** | What is the difference between error and exception? Explain exception handling in python with example. | **07** |

**OR**

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| **Q.3** | **(a)** | Explain the lambda function with syntax and example. | **03** |
| | **(b)** | Give the output of following Python code:<br>t = (1, 2, 3, (4, ), [ 5, 6] )<br>print t[ 3 ] t[4][0] = 7<br>print t | **04** |
| | **(c)** | Write a Python program to find reverse of given string using user defined function. | **07** |
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| **Q.4** | **(a)** | Explain usage of continue, break, and pass keyword in python. | **03** |
| | **(b)** | What is the difference between range and xrange? | **04** |
| | **(c)** | Create a Python program to read a text file and do following: 1. Print no. of lines<br>2. Print no. of unique words<br>3. Store each word with its occurrence in dictionary | **07** |

**OR**

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| **Q.4** | **(a)** | Give difference between black-box and glass-box testing. | **03** |
| | **(b)** | How operator overloading can be implemented in Python? Give an example. | **04** |
| | **(c)** | Write a Python program to match a string that contains only upper and lowercase letters, numbers, and underscores using Regular Expression | **07** |

**Q.5** **(a)** What is the difference between Python Arrays and lists? **03**

**(b)** Explain any four method for TCP socket in Python. **04**

**(c)** How to create a thread in python? Explain with an example. **07**

**OR**

**Q.5** **(a)** Explain regular expression methods match and search with its parameters. **03**

**(b)** Write a python program to create a plotting of years of compounding v/s value **04** of principal using pyplot library. Assume reasonable values for principal, interest rate and years

**(c)** Write GUI program using Tkinter which handle the button click event. **07**

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