

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V (NEW) EXAMINATION – SUMMER 2024****Subject Code: 3151108****Date: 16-05-2024****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) | Differentiate list and tuples. | 03 |
| (b) | Develop python program to print even numbers in a list. | 04 |
| (c) | Explain and categorize operators in python. | 07 |

- Q.2**
- | | | |
|-----|---|-----------|
| (a) | Explain dictionary in detail. | 03 |
| (b) | Develop python program to count occurrences of an element in a list | 04 |
| (c) | Explain various features of a plot in python. | 07 |

OR

- (c) Develop python program that create matrix graph of following plot using subplot
1.linear plot 2.Scatter plot 3.Histogram and 4.Bar chart

- Q.3**
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|-----|--|-----------|
| (a) | Explain for loop in detail. | 03 |
| (b) | Develop python program to construct following pattern: | 04 |

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- (c) Make use of if, if..else, if..elif..else and , nested if.

07**OR**

- Q.3**
- | | | |
|-----|---|-----------|
| (a) | Explain while loop in detail. | 03 |
| (b) | Develop python program to print factorial of a number.. | 04 |
| (c) | Explain working of break, continue and pass statement. | 07 |

- Q.4**
- | | | |
|-----|---|-----------|
| (a) | Differentiate actual and formal arguments. | 03 |
| (b) | Develop python program to display fibonacci sequence using recursion method. | 04 |
| (c) | Develop python program that convert decimal to binary, decimal to octal and decimal to hexadecimal number using user define function. | 07 |

OR

- Q.4** (a) Define SCOPE, Discuss global and local variable in detail. **03**
- (b) Define Lambda function, Utilize lambda function in an example. **04**
- (c) Develop python program to find maximum, minimum and average of given numbers using user define function. **07**

- Q.5** (a) Define micropython, explain feature of micropython. **03**
- (b) Develop python program that read and print first n lines from existing file also create new file that have first n lines from the existing file. **04**
- (c) Explain Exceptional handling in detail **07**

OR

- Q.5** (a) Enlist mode of file in python. **03**
- (b) Develop program in micropython to send digital data on GPIO pin of micropython supported board and blink LED connected to it. **04**
- (c) Develop python program to create csv file that contain five entries along with header (serial number, name, birth_date and city). **07**
