Regulation 20 *Subject code: 3O6AE*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A' Grade)

B.Tech VI Semester Regular Examinations, June 2023

Python Programming

(Civil Engineering)

Maximum Marks: 70 Date:05.07.2023 Duration: 3 hours

Note: **1.This question paper contains two parts A and B.**
2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10x2M=20 Marks)

1 Define algorithms.
2 What is control flow in the context of algorithms?
3 What is the Python interpreter?
4 What are parameters and arguments in Python functions?
5 What is iteration in Python?
6 Describe the "while" loop in Python and its usage.
7 What are lists in Python and what operations can be performed on them?
8 What is aliasing in the context of lists?
9 What are command line arguments in Python?
10 How can you read and write data to a text file using Python?

Part-B

Answer All the following questions. (5X10M=50Marks)

11 Explain the concept of control flow in algorithms and how it influences the execution order of statements. Provide examples to illustrate different control flow structures. (10)

OR

12 Discuss the role of functions in algorithm development. Explain how functions help modularize code, improve code reuse, and enhance algorithmic problem solving. (10)

13 Explain the purpose and usage of comments in Python code. Discuss how comments can improve code readability, provide explanations, and make code more maintainable. (10)

OR

14 Provide an illustrative program that calculates the distance between two points. Discuss the mathematical formula used and explain the steps involved in the program. (10)

15 Discuss the purpose and usage of the "if-else" statement in Python. Provide an example scenario where it would be appropriate to use an "if-else" statement. (10)

OR

16 Explain the concept of fruitful functions in Python. Discuss how they return values and provide examples illustrating their usage. (10)

17 Explain the concept of lists in Python. Discuss the operations that can be performed on lists, such as appending, concatenating, and indexing. Provide examples to illustrate these operations. (10)

OR

18 Discuss the use of tuples as return values in Python functions. Explain how functions can return multiple values by packing them into a tuple. Discuss the unpacking of tuple return values. Provide examples to illustrate the usage of tuples as return values. (10)

19 Discuss the role of the format operator in Python when working with files. Explain how the format operator is used to format strings and incorporate variables or values into formatted output with an example. (10)

OR

20 Discuss the difference between built-in modules and external modules. Provide examples to illustrate module usage in Python programs. (10)