



**B.Tech V Semester Supplementary Examinations, July 2024**  
**PYTHON PROGRAMMING**  
*(Information Technology)*

**Maximum Marks: 70**

Date:22.07.2024 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.
  4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A		CO	Bloom Tx
All the following questions carry equal marks (10X2M=20 Marks)			
1	Provide an example of a bitwise operator in Python.	1	L1
2	List the rules of identifiers.	1	L1
3	Write the advantages and disadvantages of using a for loop versus a while loop in Python.	2	L1
4	Write a pass statement in python?	2	L1
5	Define dictionary with an example.	3	L1
6	Define array and how to import array.	3	L1
7	Write the role of recursion in Python functions.	4	L1
8	List the string functions in python.	4	L1
9	Compare and contrast NumPy arrays and Python lists.	5	L1
10	Create a Pandas DataFrame.	5	L1
Part-B			Bloom Tx level
Answer All the following questions. (5X10M=50Marks)			
11	Explain the purpose of identity operators (is and is not) in Python. Provide examples to demonstrate their usage. [10]	1	L2
OR			
12	Categorize and explain the various types of operators in Python, including arithmetic, assignment, and comparison operators. Provide examples for each category of operators and explain their functionality. [10]	1	L3
13	a) Describe the functionality of the "range()" function in Python. Provide examples demonstrating how it can be used in conditional blocks. [5] b) Discuss the syntax and functionality of the "while" loop in Python. Provide an example illustrating the use of a "while" loop. [5]	2	L3&L3
OR			
14	Explain the concept of a nested "for" loop in Python. Provide a practical example where a nested "for" loop is useful. [10]	2	L3

15	Create a list in Python and demonstrate how to access a specific element within the list. Provide examples of basic operations on list. [10]	3	L3
	OR		
16	Discuss the manipulations that can be performed on tuples, including len(), min(), max(), count(), index(), and sorted(). Provide examples for each manipulation. [10]	3	L3
17	Define function and write a factorial program using recursion. [10]	4	L3
	OR		
18	Explain how to insert a substring into a string in Python. Provide an example demonstrating the insertion of a substring. [10]	4	L3
19	Explain the methods of indexing and slicing in NumPy arrays. Provide examples illustrating the process. [10]	5	L3
	OR		
20	Explain the methods for creating Boolean arrays in NumPy. Provide examples demonstrating their usage. [10]	5	L4