SHAMBHUNATH INSTITUTE OF ENGINEERING AND TECHNOLOGY

Subject Code: BCC302 **Subject: Python Programming**

Course: B. Tech **SEMESTER: III**

SECOND SESSIONAL EXAMINATION, ODD-SEMESTER, (2023-2024)

Branch: Computer Science & Engineering

Time –2hrs **Maximum Marks –45**

1. Attempt any five questions.

Q N	QUESTION	Marks	CO	BL
a.	What are complex data types in Python?	2	CO3	L1
b.	Why do we require a complex data type in Python, and what is the use of those data types?	2	CO3	L3
c.	Write a user-defined function to generate odd numbers between a and b (including b):	2	CO3	L2
d.	List one similarity and one difference between List and Dictionary data type.	2	CO3	L3
e.	How can you get a random number in python?	2	CO3	L1
f.	How to convert a List into a String?	2	CO3	L2

2. Attempt any *one* of the following.

Q N	QUESTION	Marks	CO	BL
a.	Solve the Tower of Hanoi problem for n= 3 disk and show all the steps.	5	CO3	L2
b.	Write a Python program to change a given string to a new string where the first and last chars have been exchanged.	5	CO3	L1
c.	Write a Python program to add an item in a tuple.	5	CO3	L3

3. Attempt any five questions.

Q N	QUESTION	Marks	CO	BL
a.	Explain any four modes of opening the file.	2	CO4	L1
b.	How are renaming and deleting performed on a file? Give the syntax for each.	2	CO4	L3
c.	What are the basic methods performed on directories?	2	CO4	L1

d.	What will be the output of the following Python code?
	i = 0
	while i< 5:
	print(i)
	i += 1
	else:
	print(0)
		2	CO2	L3

e.	What is the difference between Python module and Python package?	2	CO2	L1
f.	What will be the output of the following Python code? def cube(x): return x * x * x x = cube(3) print x	2	CO2	L2

I. Attempt any one of the following.

a.	Write a program to display the Fibonacci sequence in Python.	5	CO2	L4
b.	Discuss list data structure of python. Explain various inbuilt methods of list with suitable example of each.	5	CO2	L5
c.	Write a python program to count the vowels present in given input string. Explain the output of program through example.	5	CO2	L4