

Reg. No.:

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**TERM END EXAMINATIONS (TEE) – December 2021 – January 2022**

<b>Programme</b>	<b>B.Tech. [BCE&amp;BAI&amp;BCG&amp;BCY&amp;BHI&amp;BAC]</b>	<b>Semester</b>	<b>Fall 2021-2022</b>
<b>Course Name</b>	<b>Introduction to Problem Solving and Programming</b>	<b>Course Code</b>	<b>CSE1021</b>
<b>Faculty Name</b>	<b>Dr. L. Shakkeera</b>	<b>Slot / Class No</b>	<b>D11+D12+D13 / 0073</b>
<b>Time</b>	<b>1½ hours</b>	<b>Max. Marks</b>	<b>50</b>

**Answer ALL the Questions**

<b>Q. No.</b>	<b>Question Description</b>	<b>Marks</b>
<b>PART - A – (3 x 10 = 30 Marks)</b>		
1	(a) i) State and explain problem solving aspects with an suitable examples. ii) Mention the problem – solving strategies.	7 3
	<b>OR</b>	
	(b) i) Write a single user defined function named ‘Solve’ that returns the remainder and quotient on division of two numbers accepted from the user. Print the remainder and quotient separately on the console. ii) Write a program for user defined exception in Python to illustrate divide by zero exception.	10
2	(a) i) Write the python program for door control (open or close). Use strings and if conditions to check the status of “person in” or “person left”. ii) How do you state the importance of bitwise operators in computer platform?	10
	<b>OR</b>	
	(b) i) Briefly explain “list” sequence in Python programming with an suitable examples. ii) Write a Python program for while() and for() loops with break and continue statements.	6 4
3	(a) i) Explain the following concepts in Python Functional Programming with a suitable example. A) filter(function,sequence) B) reduce(function,sequence) C) Nested if with List Comprehension ii) State four Python Built-in functions with an examples.	6 4
	<b>OR</b>	
	(b) i) Write a Python program to get the number of occurrences of a specified element in an array. ii) Write a Python program to get the array size of types unsigned integer, integer, double, float, signed short, unsigned short and unsigned long	10
<b>Part - B – (2 x 10 = 20 Marks)</b>		
4	Get any 20 numbers. Check each number one by one to find it is divided by 3 without reminder. If the numbers are divided by 3 without	10

	remainder, find cumulative sum. Otherwise, find cumulative multiplication result. Develop an algorithm, pseudo code and flowchart for this given problem.	
5	i) Write a python program to declare a set, add items and display the sorted elements in the set. Also delete the last element from the set and display. ii) List and explain any four built-in string manipulation functions supported by Python.	10
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