

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL-MAY 2025***First Semester***Agricultural Engineering****GE3151 / UPST24105 - Problem Solving and Python Programming
(Common to All Branches)***Regulations – 2021/2024***Duration : 3 Hrs****Maximum: 100 Marks****PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)**

Q.No	Questions	BLT	CO	Marks
1.	What is an algorithm?	L1	1	2
2.	Why do we use flowcharts?	L2	1	2
3.	Name any four Python data types.	L1	2	2
4.	What is tuple assignment? Give one example.	L2	2	2
5.	What is an if-else statement?	L1	3	2
6.	State the purpose of break and continue?	L2	3	2
7.	Write two list methods in Python.	L1	4	2
8.	Differentiate between a list and a tuple?	L2	4	2
9.	What is the use of open() function?	L1	5	2
10.	Define exception handling?	L1	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

Q.No	Questions	BLT	CO	Marks
11.	a i Write steps to find the smallest number in a list. Give Python code.	L3	1	8
	i Write an algorithm to guess a number between 1 to 100. Show how it works.	L3	1	8
	Or			
	b Explain Towers of Hanoi problem and write a recursive solution for 3 disks.	L3	1	16
12.	a Explain variables and how values are stored in Python.	L2	2	16
	Or			
	b i Describe operator precedence in Python with simple examples.	L2	2	8
	i Explain basic data types in Python with examples.	L2	2	8

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| 13. | a | Write and compare Python code for GCD using loops and recursion. | L4 | 3 | 16 |
| | | Or | | | |
| | b | Explain linear and binary search. Compare them. | L4 | 3 | 16 |
| 14. | a | Write a Python program to store and display marks using a dictionary. | L2 | 4 | 16 |
| | | Or | | | |
| | b | Explain any three operations on lists with examples. | L2 | 4 | 16 |
| 15. | a | Write a program to copy one file to another. Explain with output. | L3 | 5 | 16 |
| | | Or | | | |
| | b | Write a Python program to read a text file and count the number of words. | L3 | 5 | 16 |