

Hall Ticket Number:

--	--	--	--	--	--	--	--	--	--	--	--

Code No. : 13145 S (B)

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYDERABAD

Accredited by NAAC with A++ Grade

B.E. III-Semester Supplementary Examinations, August-2022

Principles of Python Programming (OE-I)

Time: 3 hours

Max. Marks: 60

Note: Answer all questions from Part-A and any FIVE from Part-B

Part-A (10 × 2 = 20 Marks)

Q. No.	Stem of the question	M	L	CO	PO
1.	Explain the Identifiers, Keywords and Variables in Python programming language with examples.	2	2	1	1,2
2.	Write Python code to check if a given year is a leap year or not.	2	3	1	1,2
3.	Discuss the int(), float(), str(), chr() and complex() type conversion functions with examples	2	1	2	1,2
4.	Find the area and perimeter of a circle using functions. Prompt the user for input	2	3	2	1,2
5.	Write Python code to find Mean, Variance and Standard Deviation for a list of numbers. Eg. [2,5,10,21,3,4,8,21,3,78,53,89,25,1]	2	3	3	1,2
6.	Write a program that accepts a sentence and calculate the number of digits, uppercase and lowercase letters.	2	3	3	1,2
7.	Discuss zip() function with an example.	2	2	4	1,2
8.	Write Python program to generate a dictionary that contains (i: i*i) such that i is a number ranging from 1 to 10.	2	3	4	1,2
9.	Explain the basic data types available in Python with examples.	2	1	1	1,2
10.	Input five integers (+ve and -ve). Write Python code to find the sum of negative numbers, positive numbers and print them. Also, find the average of all the numbers and numbers above average.	2	3	2	1,2
<b>Part-B (5×8 = 40 Marks)</b>					
11. a)	What are the different loop control statements available in python? Explain with suitable examples.	5	2	1	1,2
b)	Write Python Program to reverse a number and also find the Sum of digits in the reversed number. Prompt the user for input.	3	3	1	1,2
12. a)	What is Recursion? Give Example.	4	1	2	1,2
b)	Write a Python function that computes the harmonic sum of n. Harmonic Sum = (1/2) + (1/4) + (1/8) + (1/16) + ..... + (1/2n)	4	3	2	1,2

13. a)	What is a list in Python? How to create nested lists? Demonstrate how to create and print a 3-dimensional matrix with lists.	5	2	3	1,2
b)	Write Python code to determine whether the given string is a Palindrome or not using slicing.	3	3	3	1,2
14. a)	Explain any four basic operations on Tuple with an illustration program.	5	1	4	1,2
b)	Write a python program that creates a dictionary of radius of a circle and its circumference.	3	3	4	1,2
15. a)	Write a short note on conditional branching statements supported by python.	4	2	1	1,2
b)	Write a Python program using functions to find the value of nPr and nCr without using inbuilt factorial() function.	4	3	2	1,2
16. a)	Write Python program to add two matrices and also find the transpose of the resultant matrix.	4	3	3	1,2
b)	What are built-in dictionary functions? Explain.	4	2	4	1,2
17.	Answer any <i>two</i> of the following:				
a)	Explain the Arithmetic Operators, Assignment Operators, Comparison Operators, Logical Operators and Bitwise Operators in detail with examples.	4	1	1	1,2
b)	Discuss the relation between tuples and lists, tuples and dictionaries in detail.	4	2	2	1,2
c)	Write Python program to count the total number of vowels, consonants and blanks in a String.	4	3	3	1,2

M : Marks; L: Bloom's Taxonomy Level; CO; Course Outcome; PO: Programme Outcome

i)	Blooms Taxonomy Level – 1	21.25%
ii)	Blooms Taxonomy Level – 2	32.5%
iii)	Blooms Taxonomy Level – 3 & 4	46.25%

\*\*\*\*\*