VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYDERABAD
Accredited by NAAC with A++ Grade
M.E./M.Tech II-Semester Main Examinations, September-2022
Fundamentals of Python Programming (OE)
(Common to all)

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.	If given a program to write, how will you select the programming language to write the code?	2	1	1	1
2.	What is len function and explain how it is used on strings with an example.	2	1	1	1
3.	Give the output of following Python code: mstr = "Vasavi College Of Engineering" print mstr [12 : : 1] print mstr [-10 : -1 : 2]	2	3	2	2
4.	How to split strings and what function is used to perform that operation?	2	1	2	1
5.	Is tuple mutable? Justify with suitable example.	2	1	3	1
6.	Illustrate key-value pairs in a dictionary?	2	1	3	1
7.	Mention the benefit of pickling in Python?	2	1	4	1
8.	What are class members how you can access them?	2	1	4	1
9.	Predict the output of the following code? import numpy as np a = np.array([1,2,3,5,8]) b = np.array([0,3,4,2,1]) c = a + b c = c*a print (c[2])	2	3	5	2
10.	Differentiate Between Histogram and Bar chart.	2	2	5	1

Part-B (5 × 8 = 40 Marks)

11. a)	Write a program to read the numbers from user until a -1 is encountered. Find the average of positive and negative numbers separately and display them.	4	3	1	2
b)	Differentiate function and module with suitable examples.	4	2	1	1

			M	L	CO	PO
12.	a)	What is a list in Python? Demonstrate use of any three methods of list.	3	1	2	1
	b)	Write a program that finds whether a given character is present in a string or not. In case if the character is present the program must return its index at which it is present. **Do not use** the built -in find function to search the character.	5	4	2	2
13.	a)	Write a python program named Weather that is passed as dictionary of daily temperatures, and returns the average temperature over the Weekend for the weekly temperatures given.	5	4	3	2
	b)	Tuples are a very useful data structure. Justify with the help of examples.	3	1	3	2
14.	a)	Illustrate how you can handle multiple exceptions in a program.	3	2	4	1
	b)	Write a Python program to read a text file and do following: 1. Print no. of words 2. Print no. Statements	5	4	4	2
15.	a)	Write a program to read n integers and display them as Histogram (Hint: Matplotlib pyplot).	4	4	5	2
	b)	Discuss various features of Scipy linalg(Linear Algebra) package.	4	2	5	1
16.	a)	Differentiate continue, break, and pass statements in python.	4	2	1	1
	b)	Is it necessary that every IF block must be accompanied with an ELSE block? Comment on this statement with the help of an example.	4	2	2	1
17.		Answer any *two* of the following:				
	a)	List and illustrate any four Built in string functions.	4	1	3	1
	b)	Write a short note on different built-in attributes associated with a class.	4	1	4	1
	c)	Discuss the importance of Matplotlib and pyplot with examples.	4	2	5	1

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

i)	Blooms Taxonomy Level – 1	30%
ii)	Blooms Taxonomy Level – 2	30%
iii)	Blooms Taxonomy Level – 3 & 4	40%

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