Reg.No.: | | | | | | | | |

VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

Question Paper Code: 5035

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – AUG. / SEP. 2023
Second Semester
Computer Science and Engineering
U19CS203 – PYTHON PROGRAMMING
(Regulation 2019)
(Common to Electrical and Electronics Engineering & Computer Science and Technology)

Time: Three Hours   Maximum: 100 Marks

Answer ALL the questions

Knowledge Levels	K1 – Remembering	K3 – Applying	K5 - Evaluating
(KL)	K2 – Understanding	K4 – Analyzing	K6 - Creating

PART – A

(10 x 2 = 20 Marks)

Q.No.	Questions	Marks	KL	CO
1.	Write the syntax of ternary operator in Python with an example.	2	K1	CO1

2.	Identify the output of the following code:
	i = 0
	while i < 3:
	    print(i)
	    i++
	    print(i+1)
		2	K3	CO1

3.	Write a snippet of code to find the average of elements in the list.	2	K3	CO2
4.	Create an empty tuple using the constructor and list the functions to add elements in the list.	2	K2	CO2
5.	Define immutability property of a string.	2	K1	CO3
6.	Why do we need regular expression? Give an example of range based regular expression.	2	K1	CO3
7.	State the significance of finally block.	2	K2	CO4
8.	How to access command line arguments inside the python script?	2	K2	CO4
9.	Given a list of integer values, draw a pie chart to represent the data.	2	K2	CO5
10.	Create a dataframe with an example.	2	K2	CO5

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PART – B

Q.No.			Questions	Marks	KL	CO
11.	a)	i.	Discuss the syntax for the control statements used in Python.	6	K1	CO1
		ii.	Print all numbers till n, which has exactly 4 divisors along with their divisors where n is the given number.	7	K3	
			(OR)			
	b)	i.	Discuss the native datatypes supported in Python and also the typecasting operations.	6	K2	CO1
		ii.	Print Fibonacci series up to a given number 'n' in Python.	7	K3	
12.	a)		Consider a dictionary consisting of rollno and (bloodgroup, status) of the students as key-value pairs. The status indicates availability or non-availability of blood group. Write a python script to add the students rollno and blood-group in the dictionary. Define a function "search" to find the availability of the given blood group and list the corresponding rollno.	13	K3	CO2
			(OR)			
	b)		Illustrate a Python program to check whether an element 'y' and 'a' belongs to the tuple. Mytuple = ("p", "y", "t", "h", "o", "n") and after printing the result, delete the tuple.	13	K3	CO2
13.	a)	i.	Discuss on how to create anonymous function with an example.	6	K2	CO3
		ii.	Define methods in a string with an example program using atleast 5 methods.	7	K2	
			(OR)			
	b)		Define a functions "isPalindrome" and "countVowels" to check whether the given string is a palindrome and count the number of vowels in the given string.	13	3	CO3
14.	a)		Define two methods getAWord() and getASentence(). getAWord() should throw a user defined exception "IllegalWordexception" if the user entered string contains at least a non-English alphabet. getASentence should throw a user defined exception "IllegalSentenceException" , if the last character of the sentence is not an English alphabet or the length of the string exceeds 50. Write a program to accept the value from the user and gives a function call to the above 2 functions. Throw appropriate error messages for the same.	13	K3	CO4
			(OR)			
	b)		Write a Python program to copy the contents of one file to another file.	13	K3	CO4

| 15. | a) | i. | Describe the characteristics of the CSV format. | 5 | K3 | CO5 |
| | | ii. | Create a csv file with the following header: Empid, name, department, designation and Salary. Receive and display 'n' records from the user and store it in csv file using Python. | 8 | | |

(OR)

| | b) | | Implement a NumPy program to add, subtract and multiply of 2 arrays. | 13 | K3 | CO5 |

PART – C

(1 x 15 = 15 Marks)

Q.No.			Questions	Marks	KL	CO
16.	a)	i.	Design a python program to receive a number and then to display the reverse of that using number recursion.	8	K3	CO3
		ii.	Explain the use of join() and split() string methods with examples.	7		

(OR)

| | b) | i. | Implement an exception block in python to catch "divide by zero" error. | 8 | K3 | CO3 |
| | | ii. | Elaborate on command line arguments with example. | 7 | | |