

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**M.Sc. DEGREE EXAMINATION – DATA SCIENCE****FIRST SEMESTER – NOVEMBER 2022****PDS1MC04 – PYTHON FOR DATA SCIENCE**

Date: 30-11-2022

Dept. No.

Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

SECTION - A**Answer ALL the Questions**

1	Choose the Correct Answer	(5 x 1 = 5)	
a)	1. Who developed the Python Programming Language? a) Wick van Rossum b) Rasmus Lerdorf c) Guido van Rossum d) Niene Stom	K1	CO1
b)	Which type of Programming does Python support? a) object-oriented programming b) structured programming c) functional programming d) all of the mentioned	K1	CO1
c)	Choose the Correct Statement a) Python code is both compiled and interpreted b) Python code is neither compiled nor interpreted c) Python code is only compiled d) Python code is only interpreted	K1	CO1
d)	Which is keyword in Python language? a) Function b) def c) Fun d) Define	K1	CO1
e)	All keywords in Python are in _____. a) Capitalized b) Lower case c) Upper case d) None of the above	K1	CO1
2	Answer ALL the Questions in one or two sentences	(5 x 1 = 5)	
a)	What will be the datatype of the var in the below code snippet? var = 10 print(type(var)) var = "Hello" print(type(var))	K2	CO1
b)	What will be the output of the following code snippet? a = [1, 2, 3, 4, 5] sum = 0 for ele in a: sum += ele print(sum)	K2	CO1
c)	What will be the output of the following code snippet? count = 0 while(True): if count % 3 == 0: print(count, end = " ") if(count > 15): break; count += 1	K2	CO1

d)	What will be the output of the following code snippet? s = {1, 2, 3, 3, 2, 4, 5, 5} print(s)	K2	CO1
e)	What will be the output of the following code snippet? a = [1, 2, 3, 4] b = [3, 4, 5, 6] c = [x for x in a if x not in b] print(c)	K2	CO1
SECTION - B			
Answer any Three of the following in 500 words		(3 x 10 = 30)	
3	Illustrate the operators in python with suitable example.	K3	CO2
4	Explain Try and except statements in python with example.	K3	CO2
5	Write a program to find the average of sum of n odd numbers using while loop	K3	CO2
6	Explain the use of break, continue and pass statements in Python with example?	K3	CO2
7	What are the plots for distribution of Matplotlib and explain with suitable example?	K3	CO2
SECTION - C			
Answer any TWO of the following in 500 words		(2 x 12.5 =25)	
8	Write a Python program using functions to find the value of nPr and nCr without using inbuilt factorial () function.	K4	CO4
9	Distinguish Lists, Dictionaries and tuples with example.	K4	CO4
10	Write a program to create 1D,2D,3D Numpy Arrays with suitable example.	K4	CO4
11	Explain the following list methods with an example. a) append() b) extend() c) insert() d) index() e) sort()	K4	CO4
SECTION - D			
Answer any ONE of the following in 1000 words		(1 x 15 =15)	
12	Write a program to create two different data frame using Given data and Merge them in all possible ways. Data Frame-1 id Maths Science Gender Area 101 89 80 M Rural 102 90 88 F Urban 106 90 77 T Metro Data Frame-2 id Maths Science Gender Area 104 89 80 M Rural 105 70 08 F Urban 107 80 87 F Metro	K5	CO5
13	Explain the heatmap,violinplot,catplot,scatterplot, res plot in python in seaborns.	K5	CO5
SECTION – E			
Answer any ONE of the following in 1000 words		(1 x 20 =20)	
14	a) Explain the file operations and write a program to implement them. b) Explain all control flow Statements in python with example.	K6	CO6
15	Create inheritance classes to illustrate Single, Multiple, Multilevel and hierarchical inheritances in python with suitable example.	K6	CO6
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