SOMAIYA VIDYAVIHAR UNIVERSITY

Sem: Oct-2024 **Maximum Marks: 50** **Examination: End Exam** **Date: 19 Oct. 2024** **Duration: 2.5hrs**		
Programme code: 18 **Programme:** MBA for working executive (program code-18)	**Class:** FY	**Semester: I** **Batch-3**
College: K. J. Somaiya Institute of Management	**Name of the department/Section/Center:** Data Science & Technology	
Course Code: 117P18C104	**Name of the Course:** Data Science Using Python	
• **Instructions:** ***All questions are compulsory.*** • ***The figures to the right indicate full marks.***		

Question No.		**Max. Marks**
Q1.	Write a Python script to create a data frame using a dictionary 1. Create a dictionary with given Key-value pair 2. Change the value of "James" to "Paul". Display the updated dictionary.	(10)
Q2.	a. Create the following DataFrame using List- b. Define a slogan as "Hum honge Kamayab". Write code for displaying all three words separately.	(06) (04)
Q3.	Consider the below mentioned data-	(10)

Name	Region	Sales	Expense
Markus	East	50000	42000
Peter	Nort	52000	43000
James	East	90000	50000
John	South	34000	44000
Luke	West	42000	38000

Name	**Age**	**Occupation**
Beena	24	Pragrammer
Reena	25	Analyst
Geeta	23	Developer
Seema	27	Manager
Reema	25	Programmer

Name	Year	State	Age	Calc_Final
Shubhar	4	MH	22	60
Raj	1	HP	27	78
Sumit		OR	24	46
John	3	RJ	23	90
Shariqu	2		25	45
Riddhi	2	OR	25	58
Reema	5	UP	26	83
Asha		CG	24	69

a. Read this file in the notebook.
b. Display information about the DataFrame.
c. Display first and last **Six** records.
d. Display the count of Null values.
e. Handle empty numeric places.
f. Get the data in proper shape (remove null values).

Q4. Create a list for the following data of profit gained – (10)
12000, 31000, 15000, 20000, 56000, 23000, 19000

a. Find the total using for loop
b. If the total is less than 1,00,000 then print "You need to improve." otherwise print "You, nailed it.".
c. Accept new value for profit gained and add it at the end of the above list.
d. Insert 50000 between 15000 and 20000.
e. Print all the elements of the list using for loop.

Q5. Create the following csv file using list– (10)

	Name	Age	Income
	Diya Nayak	27	70000
	Shravan Omayya	29	90000
	Shivam Pandey	29	61000
	Bhakti Paradkar	28	60000
	Omkar Pashte	42	150000

a. Draw Histogram of Age and Income attribute.
b. Draw Scatter Plot of Age vs Income with proper label and title.
c. Draw line graph of Age and Income attribute.
d. Show another chart with '-.' dotted line.

OR

Consider the following dataset and perform the following exploratory analysis- (10)

P_Id	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Fare
1	0	3	Mr. Owen Harris	M	22	1	0	7.25
2	1	1	Mrs. John Bradley	F	38	1	0	71.2833
3	1	3	Miss. Laina	F	26	0	0	7.925
4	1	1	Mrs. Jacques Heath	F	35	1	0	53.1
5	0	3	Mr. William Henry	M	35	0	0	8.05
6	0	3	Moran, Mr. James	M		0	0	8.4583
7	0	1	Mr. Timothy J	M	54	0	0	51.8625
8	0	3	Master. Gosta Leonard	M	2	3	1	21.075
9	1	3	Mrs. Oscar W	F	27	0	2	11.1333
10	1	2	Mrs. Nicholas	F	14	1	0	30.0708

a. Read this dataset as a dataframe.
b. Explore the number of rows & columns.
c. Display information about the DataFrame.
d. Draw Histogram of Fare attribute with proper display of bins.
e. Draw Scatter Plot of Age vs Fare with proper label and title.