THE VILLAGE
INTERNATIONAL SCHOOL
"We Nurture Dreams"

AIM HIGH, TOGETHER WE FLY

Date:12/06/23	MONTLY TEST-1 (2024-25)	Max marks:20
GRADE: XII	INFORMATICS PRACTICES 065)	Time: 50 min.

General Instructions:

All questions are compulsory.

Qn. No	SECTION A	Marks allocated
1	Predict the output: **L=['a','b','c','d']** **L[0:2]=['x','y']** **print(L)** (a) 'a' , 'b' , 'c' , 'd' (b) 'x' , 'y' , 'c' , 'd' (c) Error (d) No Output **Ans: (b)**	1
2	Create a dictionary named Dic2 by using list as values. The two keys are Name and Marks. The values of both keys are Riya, Priya, Maya, Seetha and 67,89,90,45. **Ans:** **Dic2={"Name":["Riya","Priya","Maya","Seetha"],"Marks":[67,89,90,45]}**	1
3	Assertion: Python lists are mutable, whereas strings are immutable. Reasoning: In Python, mutable objects can be modified after creation, while immutable objects cannot. Lists allow for the modification of elements, such as adding, removing, or changing values, whereas strings do not support such operations. (a) True. Lists in Python are mutable (b) False. Lists in Python are immutable **Ans: (a)**	1
4	The size of the object of Series is _____ **Ans: Immutable**	1
5	In a DataFrame, Axis=1 represents the _____ elements **Ans: Column**	1
	SECTION B	
6	What is Data Visualization. Name any two charts and the library used for the same. **Ans:** **Graphical representation of data or information. Python Matplotlib Library- It is a library ised for Data Visualization.(Line Chart, Bar Chart)**	2

7	Consider the code given below and answer the questions import pandas as pd Ld=[{'a':5,'b':10},{'a':15,'b':20,'c':30}] df=pd.DataFrame(Ld) print(df) (a) How many rows will be there in the above DataFrame df? **2 rows** (b) How many columns will be there in the above DataFrame df? **3 columns** (c) How many NaN will be there in the above DataFrame? **1 NaN** (d) How many dictionaries are used in the above code? **2 dictionaries**	2
8	What is CSV? Give one advantage and one disadvantage. **Ans:** **CSV(Comma Separated Values) Advantages of CSV- CSV files are platform independent.** **Disadvantages of CSV-Complex data cannot be handled by CSV files.**	2
9	Predict the output: (a) import pandas as pd lst=[56,78,45,12,89] print(lst) **Ans:** **[56, 78, 45, 12, 89]** (b) import pandas as pd lst=[56,78,45,12,89] print(lst[1]) **Ans: 78** (c) import pandas as pd lst=[56,78,45,12,89] print(lst[1:3]) **Ans:** **[78, 45]** (d) import pandas as p lst=[56,78,45,12,89] S1=p.Series(lst) print(S1) **Ans:** **0 56** **1 78** **2 45** **3 12** **4 89**	2
	SECTION C	

10	Create a DataFrame based on the data given below: Can use list/dictionary.	3

	NAME	ENG	SCI	SST	MAT
XI	Ashna	45	44	41	40
XII	Thomas	35	32	31	37
X	Varma	28	49	39	50
IX	Xavior	22	28	33	38

Ensure that the DataFrame with user given index and column headings

Ans:

```
import pandas as pd
marks={"NAME":['Ashna','Thomas','Varma','Xavior'],
    "ENG":[45,35,28,22],
    "SCI":[44,32,49,28],
    "SST":[41,31,39,33],
    "MAT":[40,37,50,38]
    }
result=pd.DataFrame(marks,index=["XI","XII","X","IX"])
print(result)
```

SECTION D

11	Consider the month-wise production of objects in XYZ Company. Consider the number of units in lakhs. Plot a BAR chart for the same using PyPlot module with necessary labels and titles given in the figure.	4

```
Month=['Jan','Feb','Mar','Apr','May','Jun']
Units=[12,11,10,15,18,13]
```


Production XYZ Company
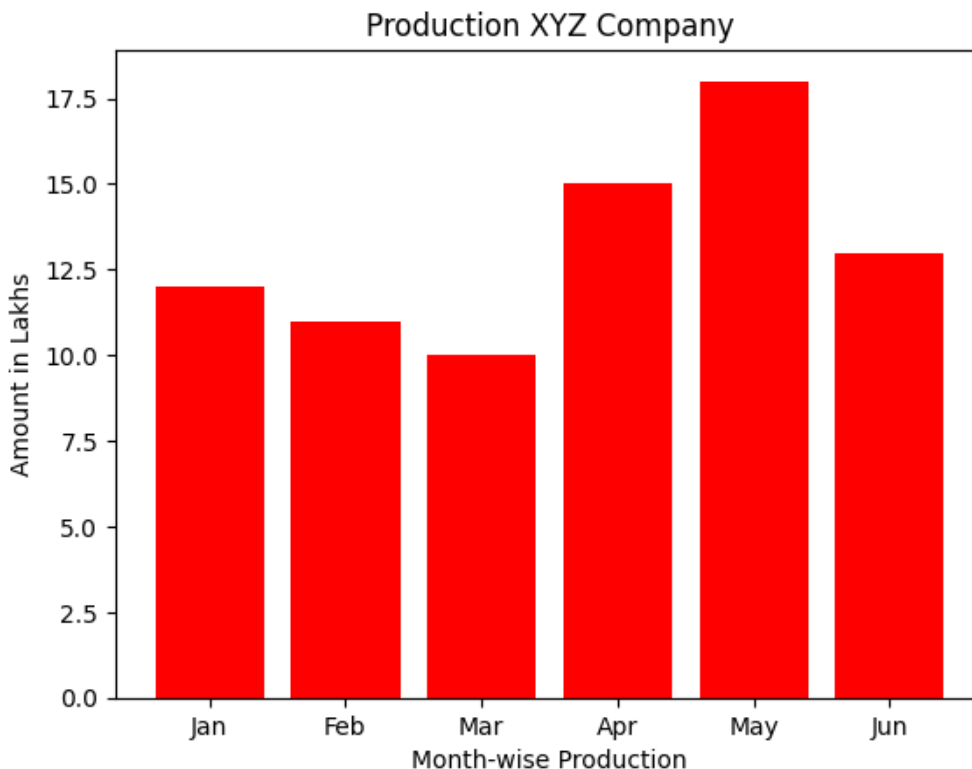
Ans:

```
import matplotlib.pyplot as plt
Month=['Jan','Feb','Mar','Apr','May','Jun']
Units=[12,11,10,15,18,13]
plt.barh(Month,Units,color="red")
plt.xlabel("Month-wise Production")
plt.ylabel("Amount in Lakhs")
plt.title('Production XYZ Company')
plt.show()
```