

Subject:- Informatics Practices(065)

Assignment-1

Q1. Mr. Ankit is working in an organisation as data analyst. He uses Python Pandas and Matplotlib for the same. He got a dataset of the passengers for the year 2010 to 2012 for January, March and December. His manager wants certain information from him, but he is facing some problems. Help him by answering few questions given below:
Code to create the above data frame:

```
import pandas as _____ #Statement 1
data={"Year":[2010,2010,2012,2010,2012],"Month":["Jan","Mar","Jan","Dec","Dec"], "Passengers":[25,50,35,55,65]}
df=pd._____ (data) #Statement 2

print(df)
```

Choose the right code from the following for statement 1 & statement 2.

Q.2. Mr. Sharma is working in a game development industry and he was comparing the given chart on the basis of the rating of the various games available on the play store. He is trying to write a code to plot the graph. Help Mr. Sharma to fill in the blanks of the code and get the desired output.

```
import _____ #Statement 1
Games=["Subway Surfer","Temple Run","Candy Crush","Bottle Shot","Runner Best"]
Rating=[4.2,4.8,5.0,3.8,4.1]
plt._____ (Games,Rating) #Statement 2
plt.xlabel("Games") plt._____ ("Rating") #Statement 3
plt._____ #Statement 4
```

Choose the right code from the following for statement 1 & 2 & 3 & 4.

Q.3. Answer the following based on the series given below.

```
import pandas as pd
list1=[1,2,3,4,5,6,7,8]
list2=['swimming','tt','skating','kho kho', 'bb', 'chess', 'football','cricket']
school=pd.Series(list1,index=list2)
school.name=("little")

print (school*2)
```

Q.4 Sanyukta is the event incharge in a school. One of her students gave her a suggestion to use Python Pandas and Matplotlib for analysing and visualising the data, respectively. She has created a Data frame "SportsDay" to keep track of the number of First, Second and Third prizes won by different houses in various events. Write Python commands to do the following:

i. Display the house names where the number of Second Prizes are in the range of 12 to 20.

ii. Display all the records in the reverse order.

iii. Display the bottom 3 records.

Q.5. Gaurav has written a Python Code to create a bar plot as given below using the following data :

```
City Happiness_Index Male Happiness_Index Female Delhi 60 30 Beijing 40 60 Washington 70 70 Tokyo 65 55
Moscow 85 75
```

Q6. Differentiate between Pandas Series and Numpy Array.

Q7. What do you mean by Pandas DataFrame. Give suitable example.

Q8. Write the code to create the empty Series.

Q9. Write the command to select the last five records from a Series.

Q10. Write the command to create the first five records from a Series.