INDIAN SCHOOL AL WADI AL KABIR
Worksheet, 2023-24

Class: XII	SUB: INFORMATICS PRACTICES	Date of Completion:
Worksheet No:1	TOPIC : Python Pandas- Series	Note: Q. Nos 16 – 19 to be written in the recoed book

1. What data type is the object below ?
    L = [1, 23, 'hello', 1].
    a) list b) dictionary c) array d) tuple

2. Consider the following python code and write the output :
    import pandas as pd
    K=pd.Series([2,4,6,8,10])
    s = pd.Series(K)
    print (s)

3. Write the output of the following command?
    import pandas as pd
    L1= [1,2,3]
    Ser1=pd.Series(L1*2)
    print(Ser1)

4. Write attributes for the following:
    i. To find the number of elements in a series S
    ii. To display the values of a series as a ndarray

5. Create a series S with the following list L : [5,10,15,20,25]. Write a statement to assign the
    series as a,b,c,d,e index explicitly
    i.   Create the series S.
    ii. Display the values which are greater than or equal to 20.
    iii. Display the values 15 and 20 using iloc .
    iv. Display the values 10 and 15 using loc.
    v. delete the value 15 from the series S.

6. Write a program to display which sections made a contribution more than Rs.5500/-.Series
    Object s11 stores the charity contribution made by each section.
    A   6700
    B   5600
    C   5000
    D   5200

7. Given the following Series P1 stores the marks made by each section:

```
        P1
a    95
b    90
c    75
d    80
```

Write the command to display the sections made a mark greater than 90

8. Consider a given Series , SR:

a	50
b	40
c	55
d	45

1. Write command in Python Pandas to update the index to E,F,G,H
2. Write command to delete the first element.

9. Write ouput for the given python code:

```
import pandas as pd
L1=[10,20,30,40,50]
S1=pd.Series([10,20,30,40,50])
S2=pd.Series(25,index=[0,1,2,3,4])
S3=S1*S2
print("L1*2=",L1*2)
print("S1*2=",S1*2)
print("S1*S2=",S3)
```

10. Given are two objects, a list object namely lst1 and a Series object namely A, both are having similar values i.e. 2, 4, 6, 8,10. Mr. Singh is trying to run the following commands. Will these commands run successfully or not. Justify your answer.
    a. print(lst1**2)
    b. print(A**2)

11. 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)                    #statement 1
print (school.tail(3))              # statement 2
print (school["tt"])                # statement 3
print (school[2:4])                 # statement 4
```

12. Write the output of the given command:

```
import pandas as pd
marks= [356,401,488,392,410]
name= ["Shristi",'Aarti','Pardeep','Sunil','Rahul']
stud = pd.Series(marks,index=name)
```

```
print(stud[stud>400].sort_values())
```

13. Write the output of the given program:
    ```
    import pandas as pd
    S1=pd.Series([3,6,9,12],index=['a','b','c','e'])
    S2=pd.Series([2,4,6,8],index=['c','d','b','f'])
    print(S1*S2)
    ```

14. Write the output of the given command:
    ```
    import pandas as pd
    s1=pd.Series([13,36,19,42],index=['a','b','c','4'])
    print(s1[s1>=30])
    ```

15. Write the output of the given command:
    ```
    import pandas as pd
    Ser1=pd.Series([12,33,46,63])
    Ser2=Ser1.sort values()
    print(Ser2.head())
    ```

16. Write a program to create series from a list of numbers, numpy array with arange() to genetate numbers 0 to 5 and a dict with 4 subject names and marks

17. Write a Program in Pandas to create series using User-defined Dictionary that contains stock details like itemname and qty of different items

18. Given a series that stores the marks of 10 students in a class. Write code to find out the biggest and the smallest 3 marks from the given series.

19 Create a Series that stores the salary of 10 employees. Write a program to display the salary of those employees who are getting more than 5000.