INDIAN SCHOOL AL WADI AL KABIR

Class: 12th (IP)	Department: Computer Science	Date of submission:
Worksheet No: 05	Topic: Python Pandas Series	Note:

1) Consider the following series **Ser1**, Which statement produce the output given?
S1=pd.Series([170,150,60,45,325], index=['E1','E2','E3','E4','E5'])
Output:
E3 60
E4 45
E5 325
a) print(Ser1['E3':'E5']) b) print(Ser1[['E3','E5']])
c) print(Ser1[,'E5']) d print(Ser1('E3,'E4','E5'))

2) Consider the following series **Ser1**, Which statement produce the output given?
Ser1= pd.Series([170,150,60,45,325], index=['E1','E2','E3','E4','E5'])
Output:
E1 170
E2 150
E3 60

a) print(Ser1.loc['E1':'E4'])
b) print(Ser1[:'E4'])
c) print(Ser1.iloc[0:3])
d) print(Ser1[:'E3'])

3) Consider the series **SER2**
S2 = pd.Series([100,150,200,300,400,550], index = [3,4,5,6,7,8])
Which statement will display the following output?
Output:
4 150
5 200
a) print(SER2.iloc[1:2] b) print(SER2.loc[4:6]) c) print(SER2.iloc[1:3]) d) print(SER2.loc[1:2])

4) **EApp** is a dictionary with the following elements,
{'Photomath':35,'Simply Piano':20, 'Google Classroom':50, 'Kahoot':30, 'Duolingo':40}
A series **EduApp** is created with the above dictionary '**EApp**'. Which statement given below will produce the following output?
Output:

Google Classroom 50
Kahoot 30
Duolingo 40

a) print(EduApp.iloc[2:4])
b) print(EduApp.loc[2:])
c) print(EduApp.iloc[2:])
d) None of the above

5) **EApp** is a dictionary with the following elements,
{'Photomath':35,'Simply Piano':20, 'Google Classroom':50, 'Kahoot':30, 'Duolingo':40}
A series **EduApp** is created with the above dictionary '**EApp**'. Which statement given below will produce the following output?

Output:

Simply Piano 20
Google Classroom 50
Kahoot 30

a) print(EduApp.loc['Simply Piano':'Duolingo'])
b) print(EduApp.iloc[1:3])
c) print(EduApp.loc['Simply Piano':'Kahoot']
d) print(EduApp.iloc[2:5])

6) The series S7 = pd.Series([12,28,50,36,60,27,22],
Index = ['A', 'B', 'C', 'D', 'E', 'F', 'G'])
Find the output of the following statement
>>>print(S7<30)

Option 1

A 12
B 28
F 27
G 22

Option 2

A True
B True
F True
G True

Option 3

A True
B True
C False
D False
E False
F True
G True

Option 4

C 50

D 36
E 60
7) The series S7 = pd.Series([12,28,50,35,60,27,22],
Index = ['A', 'B', 'C', 'D', 'E', 'F', 'G'])
Find the output of the following statement
>>>print(S7[S7>35])
Option 1
C 50
D 35
E 60
Option 2
A 12
B 28
D 35
F 27
G 22
Option 3
C 50
E 60
Option 4
A 12
B 28
F 27
G 22
8) Given a pandas series called **Inventory**, the command which will display the last 5 rows is ____.
a) print(Inventory.Tail(5)) b) print (Inventory.tail()) c) print(Inventory.tails(5))
d)print(Inventory.Tails())
9) Given a pandas series called **Showroom**, the command which will display the first 4 rows ____.
a) print (Showroom.head(4)) b) print (Showroom.heads(4))
c) print (Showroom.Head(4)) d) print (Showroom.Heads(5))
10) Given a series object named **S3** with values 100,150,250,400,600 with index P, Q, R, S, T. Find the output of the following statement:
print (S3 * 10)
Option 1 [1000, 1500, 2500, 4000, 6000]
Option 2
0 1000
1 1500
2 2500
2 4000
3 6000
Option 3

P 1000
Q 1500
R 2500
S 4000
T 6000

Option 4 None of the above

11) Given a List object named **S3** with values [25,30,40]. Find the output of the following statement:

print (S3 * 3)

Option 1 [75, 90, 120]

Option 2

0 75
1 30
2 40

Option 3

0 75
1 30
2 40
3 25
4 30
5 40
6 25
7 30
8 40

Option 4 [25,30,40,25,30,40,25,30,40]

12) Jeevan wants to create a series named **ASIA** with 'INDIA', 'SRILANKA', 'PAKISTAN', 'BANGLADESH' as keys, 'NEW DELHI', 'COLOMBU', 'ISLAMABAD, 'DHAKA' as values. Choose the correct statement from the following to create it.

a) ASIA = pd.Series(['INDIA':'NEW DELHI', 'SRILANKA':'COLOMBU', 'PAKISTAN':'ISLAMABAD', 'BANGLADESH':'DHAKA'])

b) ASIA = pd.Series({'NEW DELHI':'INDIA','COLOMBU': 'SRILANKA','ISLAMABAD': 'PAKISTAN','DHAKA': 'BANGLADESH'})

c) ASIA = pd.Series[{'INDIA':'NEW DELHI', 'SRILANKA':'COLOMBU', 'PAKISTAN':'ISLAMABAD', 'BANGLADESH':'DHAKA'}]

d) ASIA = pd.Series({'INDIA':'NEW DELHI', 'SRILANKA':'COLOMBU', 'PAKISTAN':'ISLAMABAD', 'BANGLADESH':'DHAKA'})

13) Find the output of the following code fragment.

```
import pandas as pd
s1=pd.Series([25,40,50,75,100])
s2=pd.Series([15,25,40,50])
s1.index = ['d', 'e', 'f', 'g', 'h'']
s2.index = ['c', 'd', 'f', 'j'']
s3=s1+s2
```

print(s3.size)
print(s3.shape)

Option 1

7
(7,)

Option 2

(7,)
7

Option 3

(9,)
9

Option 4

9
(9,)

14) Which of the following is used to create an empty series named **STOCKSER**?
a) STOCKSER = pd.Series(EMPTY)
b) STOCKSER = pd.Series(0)
c) STOCKSER = pd.Series(NaN)
d) STOCKSER =pd.Series()

15) Which of the following helps to create a series **SeriesA** with 5 values with scalar value 500?
a) SeriesA= pd.Series({500},index=['a','b','c','d','e'])
b) SeriesA= pd.Series([500],index=['a','b','c','d','e'])
c) SeriesA = pd.Series(500, index=['a','b','c','d','e']) d) All the above

16) Which of the following attribute is used to find the no. elements in a series object named **SB**?
a) SB.size b) SB.items c) SB.itemsize d) SB.shape

17) Which of the following attribute is used to change the name of the index to "Sports" in a series **Event**?

a) Event.index = "Sports"
b) b) Event.name = "Sports"
c) Event.index.name = "Sports"
d) Event.name.inxed = "Sports"

18) _____ function in NumPy provides an array of values.
a) array() b) range() c) arange() d) All the above

19) In Series, if DATA is a scalar value, then the _____ statement helps to create a series **DataSer** with 4 elements.
a. DataSer = pd.Series(DATA, size=[1,2,3,4])
b. DataSer = pd.Series(DATA, name=[1,2,3,4])
c. DataSer = pd.Series(DATA, index=[1,2,3,4])
d. None of the above

20) Consider the following python statement to create a series named SERIESB. What will be the default data type of the series SERIESB?

SERIESB = pd. Series([50,70,120,140,200], index=['A','B','C','D','E'])
a. int32 b. float64 c. float32 d. int64
21) Write the output of the following:
```
import pandas as pd
SER5 = pd.Series(["WEL","COME","TO","SCHOOL"], index=range(1,5))
print(SER5[2])
```
a. TO b. SCHOOL c. COME d. None of the above
22) What will be the output of the given code?
```
import pandas as pd
s6 = pd.Series(["THEORY","LAB","SPORTS"], index=[6,3,5])
print(s6.iloc[2])
```
a. LAB b. SPORTS c. Index Error d. Error
23) Assuming the given series, named **Bonus**, which command will be used to decrease 3500 in every employee's Bonus ?

Krish	27500.75
Tanmay	32450.50
Keerthana	75035.90
Vivian	45815.25
Narmatha	92477.00

dtype: float64
a. Bonus.Subtract(3500) b. Bonus.sub(3500)
c. Bonus - 3500 d. Both a and c e. Both b and c
24) Jamuna wants to store the rating in a Series **CompSer** which is already stored in a NumPy array. Choose the statement which will create the series with Company as indexes and Rating as elements.
```
import pandas as pd
import numpy as np
Rating =np.array([50, 25, 100, 75])
Company = ['TCS', 'WIPRO', 'SIEMENS', 'TATA']
CompSer= _____
```
a. CompSer = pd.Series(np.Rating, index=Company)
b. CompSer = pd.Series(Rating, index=Company)
c. CompSer = Pd.Series(index=Rating, Company)
d. CompSer = Pd.Series(Rating, Company)
25) Consider the following series named **Hotels**

Hotel1	Royal Tulip
Hotel2	Crown Plaza
Hotel3	Hilton Garden
Hotel4	Holiday Inn
Hotel5	Park Inn
Hotel6	Grand Hyatt

Write the output of the command:
```
print(Hotels.iloc[1:5:2])
```

a. Hotel2 Crown Plaza
Hotel4 Holiday Inn
Hotel6 Grand Hyatt
dtype: object

b. Hotel1 Royal Tulip
Hotel3 Hilton Garden
dtype: object

c.
Hotel2 Crown Plaza
Hotel4 Holiday Inn
dtype: object

d.
Hotel1 Royal Tulip
Hotel3 Hilton Garden
Hotel5 Park Inn
dtype: object

26) Consider the following series named **Hotels**

Hotel1 Royal Tulip
Hotel2 Crown Plaza
Hotel3 Hilton Garden
Hotel4 Holiday Inn
Hotel5 Park Inn
Hotel6 Grand Hyatt

Write the output of the command:

i) print(Hotels.loc[['Hotel3','Hotel5']])
ii) print(Hotels.loc['Hotel2','Hotel4])

a. i) Output : Array Out of Bound Error
ii) Output : Indexing Error

b. i) Output
Hotel3 Hilton Garden
Hotel5 Park Inn
dtype: object
ii) Output : Indexing Error

c. i) Output : Indexing Error
ii) Output
Hotel3 Hilton Garden
Hotel5 Park Inn
dtype: object

d. None of the above

27) Consider the following series named **Flower**:

Flower
5 Rose
6 Jasmin

7 Lilly
8 Tulip
9 Sunflower
dtype: object
Write the command that generates the output as:
5 Rose
8 Tulip
dtype: object
a. Flower[5:8] b. Flower[5:9:3]
c. Flower[:8:3] d. Flower[5,8]
28) loc() is _____ method:
a. Label indexed based function.
b. Integer position-based function.
c. not an Integer Indexed based function.
d. Both a and c
29) Write the output of the given command:
import pandas as pd
Salary= [23800, 31750, 19900, 47250, 25000]
EmpName= [‘Mithun’, 'Sneha', 'Sobia', 'Tilak', 'Aman']
Emp = pd.Series(Salary ,index=EmpName)
print(Emp[Emp < 25000])
a. Mithun 23800
Sobia 19900
Aman 25000
dtype: int64
b Mithun 23800
Sobia 19900
dtype: int64
c. Sneha 31750
Tilak 47250
Aman 25000
dtype: int64
d. Sneha 31750
Tilak 47250
dtype: int64
30) Consider the following series named **Flower**:
Flower
F1 Rose
F2 Jasmin
F3 Lilly
F4 Tulip
F5 Sunflower
dtype: object

Write the command that generates the output as:

F4 Tulip

F5 Sunflower

dtype: object

a. Flower.loc['F3':'F5']

b. Flower.iloc[3:4]

c. Flower.loc['F4':']

d. None of the above

31) Consider the following series:

>>>SER1=pd.Series([25, 15.0, 20] ,index = range(2, 11, 4))

Write the output of the following.

>>>print(SER1)

a) Output

25 2

15 6

20 10

dtype: int64

b) Output

2 25

6 15.0

10 20

dtype: int64

c) Output

2 25.0

6 15.0

10 20.0

dtype: int64

d) None of the above

32) Consider the following series:

>>>SER1=pd.Series([25.0, 15.0, 20.0, None] ,

index = range(5, 25, 5))

Write the output of the following.

>>>print(SER1)

a) Output

5 25.0

10 15.0

15 20.0

b) Output

5 25.0

10 15.0

15 20.0

20 NaN

dtype: float64

c) Output

```
5       25.0
10      15.0
15      20.0
20      None
dtype: float64
```

d) None of the above

33) A series DataSer exists with 10 elements. Which of the following Statement displays the result (10,)

a) DataSer.Shape b) DataSer.shape()

c) DataSer.shape d) DataSer.szie

34) Write the output of the following:

```
import pandas as pd
S1 = pd.Series(data = range(31, 2, -6), index = [x for x in "AEIOU" ])
print(S1)
```

a.

```
A       31
E       25
I       19
O       13
U        7
dtype: int64
```

b.

```
A       31
E       25
I       19
O       13
dtype: int64
```

c. Error

d. None of the above

35) What type of error is returned by following code?

```
import pandas as pd
S1 = pd.Series(data = (50, 35, 20), index = [1, 3, 5, 7])
```

a) Syntax Error b) Index Error c) Value Error d) None of the above