Unit Test - I (2021-22)

Date : 26/05/2021 Max Marks : 30

Class : XII Subject : Informatics Practices Time : 1 Hour

The respondent's email (**null**) was recorded on submission of this form.

* Required

1. Email *

2. Name of the Student *

3. Class / Section *

Mark only one oval.

- 12 C
- 12 D
- 12 E
- 12 F
- 12 G

4. GR No *

GENERAL INSTRUCTIONS:

i. There are 30 questions.
ii. Each question carries one mark.
iii. All questions are compulsory.
iv. Choose only one answer from the options given below.

Section A

5. * 1 point

Find the output of the following statements:
Airlines=pd.Series(['Jet Airways', 'Oman Air', 'Air India Express', 'Indigo', 'Go Air', 'Emirates'], index=['Air1','Air2','Air3','Air4','Air5','Air6'])
print(Airlines)

Mark only one oval.

Option 1:
0 Jet Airways
1 Oman Air
2 Air India Express
3 Indigo
4 Go Air
5 Emirates

Option 1

Option 2:
Air1 Jet Airways
Air2 Oman Air
Air3 Air India Express
Air4 Indigo
Air5 Go Air
Air6 Emirates

Option 2

Option 3
1 Jet Airways
2 Oman Air
3 Air India Express
4 Indigo
5 Go Air
6 Emirates

Option 3

Option 4

None of the above

Option 4

6. * 1 point

Find the output of the following statements:
import numpy as np
ARR=np.arange(50,100,12)
ser1=pd.Series(ARR, index=['A1','A2','A3','A4',’A5’])
print(ser1)

Mark only one oval.

Option 1

a1 50
a2 62
a3 74
a4 86
a5 98

Option 1

Option 2

0 50
1 62
2 74
3 86
4 98

Option 2

Option 3

A1 50
A2 62
A3 74
A4 86
A5 98

Option 3

Option 4

1 50
2 62
3 74
4 86
5 98

Option 4

7. *

1 point

Find the output of the following statements:
IND=np.arange(10,15)
ser2=pd.Series(100, index=IND)
print(ser2)

Mark only one oval.

Option 1
0 100
1 100
2 100
3 100
4 100

Option 1

Option 2
10 100
11 110
12 120
13 130
14 140

Option 2

Option 3
a 100
b 100
c 100
d 100
e 100

Option 3

Option 4
10 100
11 100
12 100
13 100
14 100

Option 4

8. *

1 point

Find output of the following statements with respect to the pandas series Books:

```
Book1   Java script
Book2   LINQ
Book3   C#
Book4   AJAX
Book5   VBA
Book6   SQL Server
print(Books.loc['Book2':'Book5'])
```

Mark only one oval.

Option 1

```
Book2   LINQ
Book3   C#
Book4   AJAX
```

Option 2

```
Book2   LINQ
Book3   C#
Book4   AJAX
Book5   VBA
```

Option 3

```
Book3   C#
Book4   AJAX
Book5   VBA
```

Option 4

```
Book2   LINQ
Book3   C#
Book4   AJAX
Book5   VBA
Book6   SQL Server
```

9. * 1 point

Find output of the following statements with respect to the pandas series Books:

```
Book1   Java script
Book2   LINQ
Book3   C#
Book4   AJAX
Book5   VBA
Book6   SQL Server
print(Books.iloc[2:4])
```

Mark only one oval.

Option 1

```
Book2   LINQ
Book3   C#
Book4   AJAX
```

Option 2

```
Book3   C#
Book4   AJAX
Book5   VBA
```

Option 3

```
Book2   LINQ
Book3   C#
Book4   AJAX
Book5   VBA
```

Option 4

```
Book3   C#
Book4   AJAX
```

10. * 1 point

Find the output of the following statements:
Ser3=pd.Series([20,15,35,5])
Ser4=pd.Series([5,5,5])
print(Ser3*Ser4)

Mark only one oval.

Option 1
0 100
1 75
2 175
3 25

Option 1

Option 2
0 100.0
1 75.0
2 175.0
3 25.0

Option 2

Option 3
0 100.0
1 75.0
2 175.0
3 NaN

Option 3

Option 4
0 100
1 75
2 175
3 NaN

Option 4

11. * 1 point

Find the output of the following statements:

```
Ser1=pd.Series([50,100,150,200,250])
Ser2=pd.Series([20,30,30])
print(Ser1.add(Ser2, fill_value=100))
```

Mark only one oval.

Option 1

```
0   70
1   130
2   180
3   200
4   250
```

Option 1

Option 2

```
0   70.0
1   130.0
2   180.0
3   NaN
4   NaN
```

Option 2

Option 3

```
0   70.0
1   130.0
2   180.0
3   300.0
4   350.0
```

Option 3

Option 4

```
0   70
1   130
2   180
3   NaN
4   NaN
```

Option 4

12. * 1 point

Find the output of the following operations over the series Ser5:
Ser5=pd.Series([3,5,8,10,12], index = ['a', 'b', 'c', 'd', 'e']
print(Ser5*5)

Mark only one oval.

Option A
a: 15 b: 25 c: 40 d: 50 e: 60

Option 1

Option B
[15, 25, 40, 50, 60]

Option 2

Option C
0 15
1 25
2 40
3 50
4 60

Option 3

Option D
a 15
b 25
c 40
d 50
e 60

Option 4

13. * 1 point

Find the output of the following statements over the series Series1

```
Series1
0   325
1    58
2    37
3   155
4   210
5    75
6   110
print(Series1[Series1<100])
```

Mark only one oval.

Option 1
1 58
2 37
5 75

Option 1

Option 2
1 True
2 True
5 True

Option 2

Option 3
0 False
1 True
2 True
3 False
4 False
5 True
6 False

Option 3

Option 4
None of the above

Option 4

14. * 1 point

What is the statement to add a new element 150 in a series S7 at index F.

S7
A 20
B 30
C 50
D 70
E 80

Mark only one oval.

Option 1
S7[F] = 150

Option 1

Option 2
S7[6] = 150

Option 2

Option 3
S7['F'] = 150

Option 3

Option 4
S7['f'] = 150

Option 4

15. * 1 point

_____ is a two-dimensional data structure used in python pandas.

Mark only one oval.

- Panel
- Data Frame
- Series
- Numpy

16. * 1 point

Ms. Stella is working in an organization as data analyst. She has the following data frame with her. Help her to fill the blank given in Statement 1:

```
import pandas as _____ #Statement 1
data = {"Region": ['North', 'South', 'East', 'West'],
"Jan" : [1066,1121,1053,1108],
"Feb": [1012,1010,1046,1178],
 "Mar":[1143,1061,1054,1200]}
df=pd._____(data)
print(df)
```

Mark only one oval.

- df
- pd
- data
- p

17. * 1 point

Ms. Stella is working in an organization as data analyst. She has the following data frame with her. Help her to fill the blank given in Statement 2:

```
import pandas as _____
data={"Region":['North','South','East','West'],"Jan":[1066,1121,1053,1108],
"Feb":[1012,1010,1046,1178], "Mar":[1143,1061,1054,1200]}
df=pd._____(data)    #Statement 2
print(df)
```

Mark only one oval.

- Tuple
- DataFrame
- Series
- Dictionary

18. * 1 point

Consider the following data frame named Empdf.

	EmpId	FirstName	Department	Location
0	101	Donald	Finance	Bangalore
1	102	Samuel	Marketing	Hyderabad
2	103	Ian	Finance	Pune
3	104	David	IT	Bangalore
4	105	Henry	Marketing	Pune
5	106	Ronica	IT	Chennai

Choose the correct statement for the required output:
(6,4)

Mark only one oval.

- Empdf.columns
- Empdf.size
- Empdf.shape
- Empdf.dtypes

19. * 1 point

Consider the following data frame named Empdf.

	EmpId	FirstName	Department	Location
0	101	Donald	Finance	Bangalore
1	102	Samuel	Marketing	Hyderabad
2	103	Ian	Finance	Pune
3	104	David	IT	Bangalore
4	105	Henry	Marketing	Pune
5	106	Ronica	IT	Chennai

Display the first 3 records from Empdf

Mark only one oval.

- Empdf.head()
- Empdf.HEAD(3)
- Empdf.head(3)
- Empdf.Head()

20. * 1 point

Consider the following data frame named Empdf.

	EmpId	FirstName	Department	Location
0	101	Donald	Finance	Bangalore
1	102	Samuel	Marketing	Hyderabad
2	103	Ian	Finance	Pune
3	104	David	IT	Bangalore
4	105	Henry	Marketing	Pune
5	106	Ronica	IT	Chennai

Which command will give the output 24.

Mark only one oval.

- Empdf.shape
- Empdf.size
- Empdf.axes
- Empdf.index

21. * 1 point

Consider a given DataFrame, Student:

	Name	Age
A	Freya	10
B	Mohak	12
C	Dwidvedi	13

Write a statement in Python Pandas to create the DataFrame with above values.
import pandas as pd
_____ # statement to create data frame student.

Mark only one oval.

- Student = pd.DataFrame({'Name':['Freya', 'Mohak', 'Dwivedi'], 'Age':[10,12,13]})
- Student = pd.Dataframe({'Name':['Freya', 'Mohak', 'Dwivedi'], 'Age':[10,12,13]}, index=('A','B','C'))
- Student = pd.Dataframe({'Name':['Freya', 'Mohak', 'Dwivedi'], 'Age':[10,12,13]})
- Student = pd.DataFrame({'Name':['Freya', 'Mohak', 'Dwivedi'], 'Age':[10,12,13]}, index=['A','B','C'])

22. * 1 point

Consider the following DataFrame.
import pandas as pd
df = pd.DataFrame({"A": [10, 20, 30], "B": [40, 50, 60]})
print(df)

	A	B
0	10	40
1	20	50
2	30	60

Write command to Add a new column 'C' to the DataFrame with values 70,80,90.

Mark only one oval.

- df.C=[70,80,90]
- df.loc['C']=[70,80,90]
- df['C']=[70,80,90]
- df[C]=[70,80,90]

23. * 1 point

Consider a given DataFrame, Student:

Name	Age
Freya	10
Mohak	12
Dwidvedi	13

Write command to add a new row at index 'D' with values 'Rekha' and 11

Mark only one oval.

- Student.loc[D] = ['Rekha',11]
- Student['D'] = ['Rekha',11]
- Student.loc['D'] = ['Rekha',11]
- Student.iloc['D'] = ['Rekha',11]

24. * 1 point

Consider the following DataFrame df1
import pandas as pd

	A	B	C
0	10	40	70
1	20	50	80
2	30	60	90

Write command to remove the column 'B' from the data frame df1.

Mark only one oval.

- df1.remove('B', axis=1)
- df1.drop('B')
- df1.drop('B', axis=1)
- df1.del('B', axis=1)

25. * 1 point

Consider the following data frame named StudExam

	Roll_No	Name	Theory	Practical
0	1	Prem	52	29
1	2	Prakash	38	28
2	3	Meena	62	30
3	4	Raj	45	29
4	5	Meena	56	28

Write the statement to add a new column Total = Theory + Practical

Mark only one oval.

- StudExam[Total]=StudExam[Theory]+StudExam[Practical]
- StudExam['Total']=StudExam['Theory']+StudExam['Practical']
- StudExam.Total=StudExam[Theory+Practical]
- StudExam.Total=StudExam.Theory+StudExam.Practical

26. * 1 point

Consider the following data frame named StudExam

	Roll_No	Name	Theory	Practical
0	1	Prem	52	29
1	2	Prakash	38	28
2	3	Meenakshi	62	30
3	4	Raj	45	29
4	5	Meena	56	28

Write the statement to remove the record of Meena

Mark only one oval.

- StudExam.drop(4, axis=1)
- StudExam.del(4, axis=0)
- StudExam.drop(4, axis=0)
- StudExam.remove(4, axis=0)

27. * 1 point

_____ is used to check whether a data frame named Facultydf is empty or not.

Mark only one oval.

- Facultydf.blank
- Facultydf.empty
- Facultydf.Empty
- Facultydf.isNull

28. * 1 point

_____ helps to transpose a given data frame named Labdata, which makes rows becomes columns and columns becomes rows.

Mark only one oval.

- Labdata.trans
- Labdata.Transpose
- Labdata.T
- Labdata.T()

29. * 1 point

Consider the following data frame named University

	Name	Branch	Score	Result
0	Akash	B Tech	80	Pass
1	Geetu	MBA	90	Pass
2	Pankaj	BCA	60	Pass
3	Sumitra	B Tech	30	Fail
4	Ramlal	BCA	50	Fail

Write a statement to change the default index with Name column.

Mark only one oval.

- University.reindex(Name, inplace=True)
- University.set_index(Name, inplace=True)
- University.change_index(Name, inplace=True)
- University.modify_index(Name, inplace=True)

30. * 1 point

Consider the following data frame named University

	Name	Branch	Score	Result
0	Akash	B Tech	80	Pass
1	Geetu	MBA	90	Pass
2	Pankaj	BCA	60	Pass
3	Sumitra	B Tech	30	Fail
4	Ramlal	BCA	50	Fail

Write a statement to extract Name and Result column values of Geetu to Sumitra.

Mark only one oval.

- University.loc[[1,3], ['Name', 'Result']]
- University.loc[1:3, ['Name', 'Result']]
- University.loc[[1,3], 'Name': 'Result']
- University.loc[1:3, 'Name': 'Result']

31. * 1 point

Consider the following data frame named University

	Name	Branch	Score	Result
0	Akash	B Tech	80	Pass
1	Geetu	MBA	90	Pass
2	Pankaj	BCA	60	Pass
3	Sumitra	B Tech	30	Fail
4	Ramlal	BCA	50	Fail

Write a statement to extract the records of those students who scored less than 75.

Mark only one oval.

- University[University.'Score'<75]
- University[University['Score'<75]]
- University[University['Score']<75]
- None of the above

32. * 1 point

Consider the following data frame named Mobiledf

	ProdID	ProdName	Price
0	1542	Microsoft Lumia	200
1	3739	HTC One	400
2	1734	Nexus	500
3	2783	iPhone	900
4	6734	HP Elite	1200
5	5392	Lenovo Thinkpad	725

Write the command to display column labels of Mobiledf

Mark only one oval.

- Mobiledf.column
- Mobiledf.columns
- Mobiledf.columnlabels
- Mobiledf.cols

33. * 1 point

Consider the following data frame named Mobiledf

	ProdID	ProdName	Price
0	1542	Microsoft Lumia	200
1	3739	HTC One	400
2	1734	Nexus	500
3	2783	iPhone	900
4	6734	HP Elite	1200
5	5392	Lenovo Thinkpad	725

Write the command to change the column name ProdName to Product Name.

Mark only one oval.

- Mobiledf.rename({'ProdName':'Product Name'}, axis=columns)
- Mobiledf.rename(['ProdName':'Product Name], axis=columns)
- Mobiledf.rename('ProdName':'Product Name', axis=columns)
- Mobiledf.rename({'ProdName':'Product Name'}, axis='columns')

34. * 1 point

```
import pandas as pd
Sportsdf = pd._____("E:\Sports.csv", sep=",")
```

a) read b) read_csv c) to_csv d) input_csv

Mark only one oval.

- read
- read_csv
- to_csv
- input_csv