

9/4/22

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**INDIAN SCHOOL MUSCAT
HALF YEARLY EXAMINATION 2022
INFORMATICS PRACTICES (065)**



CLASS : XII
DATE: 15.09.2022

TIME ALLOTTED : 3 HRS.
MAXIMUM MARKS: 70

GENERAL INSTRUCTIONS:

1. Read the Questions carefully and write the Answers.
2. All the Questions are compulsory.

- | | | |
|-----|--|---|
| 1. | Define Web Browser. | 1 |
| 2. | What do you understand by the term “Add-on”? | 1 |
| 3. | Define plug-in. | 1 |
| 4. | Write any four major functions of a web browser. | 2 |
| 5. | Define cookie. | 1 |
| 6. | Google Chrome is an example of
(a) Web site (b) Web Browser (c) Web Page (d) None | 1 |
| 7. | Write all the steps for resetting Mozilla Fire Fox to Default Settings. | 2 |
| 8. | Define www. | 1 |
| 9. | Write the full form of “ARPANET”. | 1 |
| 10. | Write any two applications of internet. | 1 |
| 11. | Define URL with an example. | 1 |
| 12. | Write any two advantages and disadvantages of VOIP. | 2 |
| 13. | Define Domain name with an example. | 2 |
| 14. | Write any two basic functions of Email. | 1 |
| 15. | A _____ is data that is left behind when users have been online. | 1 |
| 16. | Define Data Protection. | 1 |
| 17. | Define “Plagiarism”. | 1 |
| 18. | What do you understand by the term “FOSS”? | 1 |

19. Write the difference between “Free Software” and “Proprietary Software”. 1
20. What do you mean by Series in Python? 1
21. Write a program in Python to create series of vowels (Name of the Series is VOWEL). 2
22. Write the output of the following: 2
- ```
import pandas as pd
S1 = pd.Series(12, index = [4, 6, 8])
print(S1)
```
23. Name any two attributes of Series in Python. 1
24. Find the output of the following: 2
- ```
import pandas as pd
S1 = pd.Series(range(1,15,3), index=[x for x in "super"])
print(S1)
```
25. What is wrong in this following code? Specify the Reason with the ERROR name. 2
- ```
import numpy as num
import pandas as pd
arr=num.array([1,7,21])
S1 = pd.Series(arr, index = (77,777))
print(S1)
```
26. Find the output of the following: 2
- ```
>>> import numpy as np
>>> a=np.array([2,4,8,9,12,11])
>>> a
>>> a[-1:-4:-2]
```
27. Fill in the blanks in the given code : 1
- ```
import pandas as pd
_____ = _____.Series([1, 2, 3, 4, 5])
print(S1)
```
28. Write a code to modify the value 5000 to 7000 in the following Series “S1” 1
- A 25000
- B 12000
- C 8000
- D 5000
29. Name the methods used for multiplication and division of two Series in Python. 1
30. Write any one difference between Numpy array and Pandas Series. 1
31. \_\_\_\_\_ is a Pandas data structure that represent one dimensional array containing a sequence of values of any data type. 1

32. Consider the following Series object “S1” and write the output of the following statement :

```
0 21
1 41
2 62
3 81
4 23
5 15
6 68
7 89
```

```
import pandas as pd
L1=[21,41,62,81,23,15,68,89]
S1 = pd.Series(L1)
print("1. ",S1.empty)
print("2. ",S1.shape)
print("3. ",S1[5]**2)
```

1  
1  
1

33. Write a Python code to generate the data frame(MARKS) and display the result as whose mark is greater than 40.

2

|        | Marks |
|--------|-------|
| Manish | 45    |
| Scott  | 34    |
| Rhea   | 67    |

34. Define mean( ) and mode( ) in Python Pandas.

2

35. Find the output of the following:

2

```
import pandas as pd
df1=pd.DataFrame([[10,20],[40,50]],columns=["A","B"])
df2=pd.DataFrame([[10,20],[40,50]],columns=["B","A"])
df3=df1.append(df2)
print(df3)
```

36. Write a python code to create the following DataFrame (DF1) and add a new raw to it.

2

```
 AMOUNT
ACTS 7078
HRD 4045
SERVICE 9900
```

New Row is : “CSC” Amount 5608

37. Find the output of the following: 2  

```
import pandas as pd
df1=pd.DataFrame([[1,2,3,6],[6,7,9,12]])
print(df1)
print(df1.add(10))
print(df1.sub(5))
```
38. Given a Series that stores the area of some states in km<sup>2</sup> , write code to find out the largest and smallest two areas from the given states. The given Series has been created like this: 2  

```
Ser1=pd.Series((3214,5678,1234,6789,4567,2345,1432,5431))
```
39. In a Data Frame , axis=0 is for \_\_\_\_\_. 1
40. Data Frame is a 1  
 (a) One Dimensional array      (b) Three Dimensional Array  
 (c) Two dimensional Array      (d) None
41. iloc is used for indexing or selecting based on \_\_\_\_\_. 1
42. Find the output of the following: 1  

```
import pandas as pd
k=pd.Series([2,4,8,6,1,12,14])
print(k.quantile(0.50))
```
43. \_\_\_\_\_ is used to keep all the similar data together in Pandas DataFrame. 1
44. Write the code to sort the given dataframe (say df and consisting of Students Details like GRNO,ROLLNO,NAME,CLASS,MARKS)in Descending order of GRNO. 1
45. \_\_\_\_\_ in statistics are values that divide data into quarters. 1
46. Which function is used to find the average value from the set of numbers? 1
47. Find the output: 1  

```
import pandas as pd
List=[1,2,3,4]
Df1=pd.DataFrame(List*2)
print(Df1)
```
48. Define reset.index().drop() in Data Frame. 1
49. Mr.Satish is learning PYTHON Data Frame.He is having some doubts with the DATA Frame attributes. Help him to get the proper definition and an output based on the following attributes:  

```
import pandas as pd
marks=pd.DataFrame({"Name":["Raj","manish","Rahul",
"Scott","Rhea","Paul"],
"Marks":[34,56,78,90,98,96]},index=["A","B","C","D","E","F"])
print(marks)
```

|                |   |
|----------------|---|
| a)marks.index  | 1 |
| b)marks.dtypes | 1 |
| c)marks.shape  | 1 |
| d)marks.T      | 1 |
| e)marks.head() | 1 |

**\*\*\*\*END OF THE QUESTION PAPER\*\*\*\***



2/14/19

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| SET | B |
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**GENERAL INSTRUCTIONS:**

1. Read the Questions carefully and write the Answers
2. All the Questions are compulsory.

- |    |                                                                                                     |   |
|----|-----------------------------------------------------------------------------------------------------|---|
| 1. | What do you mean by Series in Python?                                                               | 1 |
| 2. | Write a program in Python to create series of odd numbers from 1 to 10 (Name of the Series is ODD). | 2 |
| 3. | Write the output of the following:                                                                  | 2 |

```
import pandas as pd
S1 = pd.Series(range(1,6,2), index = [10, 12, 8])
print(S1)
```

- |    |                                              |   |
|----|----------------------------------------------|---|
| 4. | Name any two attributes of Series in Python. | 1 |
| 5. | Find the output of the following:            | 2 |

```
import pandas as pd
S1 = pd.Series(range(2,11,2), index=[x for x in "INDIA"])
print(S1)
```

- |    |                                                                               |   |
|----|-------------------------------------------------------------------------------|---|
| 6. | What is wrong in this following code? Specify the Reason with the ERROR name. | 2 |
|----|-------------------------------------------------------------------------------|---|

```
import numpy as num
import pandas as pd
arr=num.array([10,70,21])
S2 = pd.Series(arr, index = (67,54))
print(S2)
```

- |    |                                   |   |
|----|-----------------------------------|---|
| 7. | Find the output of the following: | 2 |
|----|-----------------------------------|---|

```
>>> import numpy as np
>>> b=np.array([21,2,4,8,9,12,11])
>>> b
>>> b[-1:-4:-2]
```

8. Fill in the blanks in the given code : 1
- ```
import pandas as pd
_____ = _____.Series([5, 12, 23, 4, 5])
print(S1)
```
9. Write a code to modify the value 5000 to 7000 in the following Series "S1" 1
- A 25000
B 12000
C 8000
D 5000
10. Name the methods used for multiplication and division of two Series in Python. 1
11. A _____ is data that is left behind when users have been online. 1
12. Define Data Protection. 1
13. Define "Plagiarism". 1
14. What do you understand by the term "FOSS"? 1
15. Write the full form of "ARPANET". 1
16. Write any two applications of internet. 1
17. Define URL with an example. 1
18. Write any two basic functions of Email. 1
19. Write the difference between "Free Software" and "Proprietary Software". 1
20. Write any four major functions of a web browser. 2
21. Write all the steps for resetting Mozilla Fire Fox to Default Settings. 2
22. Write any two advantages and disadvantages of VOIP. 2
23. Define Domain name with an example. 2
24. Define Web Page. 1
25. What do you understand by the term "Add-on"? 1
26. Define plug-in. 1
27. Define cookie. 1
28. Fire Fox is an example of _____ 1
- Web site (b) Web Browser (c) Web Page (d) None
29. Define www. 1
30. Write any one difference between Numpy array and Pandas Series. 1

31. _____ is a Pandas data structure that represent one dimensional array containing a sequence of values of any data type. 1

32. Consider the following Series object "S1" and write the output of the following statement:

```
0 21
1 41
2 62
3 81
4 23
5 15
6 68
7 89
```

```
import pandas as pd
L1=[21,41,62,81,23,15,68,89]
S1 = pd.Series(L1)
print("1. ",S1[5]**3)
print("2. ",S1.shape)
print("3. ",S1.empty)
```

1

1

1

33. Find the output of the following:

2

```
import pandas as pd
df1=pd.DataFrame([[10,20],[40,50]],columns=["A","B"])
df2=pd.DataFrame([[10,20],[40,50]],columns=["B","A"])
df3=df1.append(df2)
print(df3)
```

34. Define mean() and mode() in Python Pandas.

2

35. Write a Python code to generate the data frame(MARKS) and display the result as whose marks are less than 50.

2

	Marks
Scott	45
Raja	34
Rhea	67
Paul	55

36. Write a python code to create the following DataFrame (DF5) and add a new row to it.

2

```
      AMOUNT
ACTS      7078
CSC       4045
SERVICE  9900
```

New Row is : "HRD" Amount 3608

37. Data Frame is a 1
 (a) One Dimensional array (b) Three Dimensional Array
 (c) Two dimensional Array (d) None
38. Find the output of the following: 2

```
import pandas as pd
df1=pd.DataFrame([[1,2,3,6],[6,7,9,12]])
print(df1)
print(df1.add(20))
print(df1.sub(15))
```
39. In a Data Frame , axis=0 is for _____. 1
40. Given a Series that stores the area of some states in km² , write code to find out the largest and smallest two areas from the given states. The given Series has been created like this: 2

```
S1=pd.Series((3214,5678,1234,6789,4567,2345,1432,5431))
```
41. iloc is used for indexing or selecting based on _____. 1
42. Find the output of the following: 1

```
import pandas as pd
k=pd.Series([2,4,8,9,1,12,14])
print(k.quantile(0.50))
```
43. _____ in statistics are values that divide data into quarters. 1
44. Which function is used to find the average value from the set of numbers? 1
45. Find the output 1

```
import pandas as pd
List=[4,3,5,6]
Df1=pd.DataFrame(List*2)
print(Df1)
```
46. Define reset_index()_drop() in Data Frame. 1
47. _____ is used to keep all the similar data together in Pandas DataFrame. 1
48. Write the code to sort the given dataframe (say df and consisting of Students Details like GRNO,ROLLNO,NAME,CLASS,MARKS)in Descending order of GRNO. 1

49. Mr.Saran is learning PYTHON Data Frame.He is having some doubts with the DATA Frame attributes. Help him to get the proper definition and an output based on the following attributes:

```
import pandas as pd
marks=pd.DataFrame({"Name":["Rahul","mani","Raj",
"Scott","Rhea","Paul"],
"Marks":[45,56,78,90,98,96]},index=["A1","B1","C1","D1","E1","F1"])
print(marks)
```

- | | |
|-----------------|---|
| a)marks.T | 1 |
| b)marks.dtypes | 1 |
| c)marks.shape | 1 |
| d)marks.values | 1 |
| e)marks.tail(1) | 1 |

******END OF THE QUESTION PAPER******

