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Sample Question Paper (Term-I)

Class	: XII	**Time Allowed**	: 90 Minutes
Subject	: (065) Informatics Practices	**Maximum Marks: 35**	

General instructions:
- The paper is divided into 3 Sections- A, B and C.
- Section A, consists of Question 1 to 25 and student need to attempt 20 questions.
- Section B, consists of Question number 26 to 49 and student need to attempt 20 questions.
- Section C, consists of Question number 50 to 55 and student need to attempt 5 questions.
- All questions carry equal marks (0.77 mark per question).

Section – A
Section A consists of 25 questions, attempt any 20 questions

1. By default the index of a Series Start with ____
   a. 1
   b. 0
   c. Random number
   d. It is compulsory to provide a starting index umber while creating series.

2. Series is a _____ dimensional, while Pandas is _____dimensional.
   a. One , One
   b. Two , one
   c. One, Two
   d. Two, Two

3. Which of the following statement will create an empty series ?
   a. S= pd.Series(None)
   b. S = pd.Series( )
   c. Both of the above
   d. None of the above

4. The Datatype (dtype) of a series containing value of different types is
   a. float64
   b. float32
   c. Object
   d. None of the above

5. Consider the following command to create a series S
   s=pd.Series(index=['a', 'b', 'c', 'd'], data=[10,20,30,40])

   a. The above statement will not execute properly as data is positional argument and must appear before index argument.
   b. The above statement will execute properly, but index argument will be ignored and default index will be applied.
   c. The above statement will execute properly, but index, will be taken as data
   d. The above statement will execute properly.

6. Consider a series
   S=pd.Series([3, 4, 10, None, 12]).
   What will be output of the following command?
   >>> print(S.count())
   a. 4
   b. 5
   c. NaN
   d. None of the above

7. Which attribute of histogram function helps to set the number of bin in the desired graph?
   a. bins
   b. bin
   c. basket
   d. baskets

8. In which of the following situation, bar graph can be plotted?
   a. Showing frequency distribution of a sample of size 200.
   b. Display of average rainfall in month of March in last 5 years.
   c. Display sine curve.
   d. Display three quartile of a large data

9. Given a Pandas series name S, the command which will display the last 4 rows is _____.
   a. print(S.tail(4))
   b. print(S.Tail(4))
   c. print(S.end(4)
   d. print(S.last(4))

10. Which attribute of plot( ) function is used to set the edge color of bar in bar chart?
    a. bordercolor
    b. colorofedge
    c. edgecolor
    d. none of the above

11. Which of the following is type of Digital Footprints?
    a. Active digital footprints
    b. Passive digital footprints
    c. Both of the above
    d. None of the above

12. To reduce Active Digital footprints:
    a. Change browser
    b. Change Internet Service Provider
    c. Allow cookies only after proper verification
    d. Share your email-id and other information with trusted source only.

13. Find the odd one out
    a. Copyright
    b. Patent
    c. Creative Commons
    d. Trademarks

14. Let there be a Series S containing integers. Command to multiply each of the elements of Series S with 5 and store the result in the same Series is
    a. S=S.prod(5)
    b. S=S*5
    c. Scalar value cannot be multiplied to a Series Elements
    d. S.Smul(5)

15. Our digital foot prints are stored in _____
    a. Local web browser
    b. Servers where the applications are hosted
    c. Both of the above
    d. None of the above

16. _____ is a technique of converting data into an unreadable format, so that it can be transmitted safely over a network
    a. Digital Saving
    b. Encryption
    c. E-Commerce
    d. Data-Hiding

17. Which is the following command will display the row labels of the data frame?
    a. print(df.index())
    b. print(df.indexes())
    c. print(df.row())
    d. print(df.index)

18. To display the 5th element of a series, using the positional index, of a Series – S
    a. s[4]
    b. s.loc[4]
    c. s.iloc[4]
    d. All of the above

19. Consider a series
    S= pd.Series(10, index=[10, 20, 30]).
    What will be output of the following
    command?
    >>> print(S[-1])
    a. Error
    b. 10
    c. 20
    d. 30

20. By default the marker in a line plot is
    a. Square
    b. Circle
    c. Cross
    d. There is no marker by default in a line
    plot.

21. A _____ protects Literacy and Artistic works
    such as books, novels, compositions, etc. from
    getting copied or utilized without permission.
    a. Patient
    b. IPR
    c. Copyright
    d. Trademark

22. The function used to refer a row in a
    DataFrame is
    a. at ()
    b. loc()
    c. both at() and loc()
    d. none of the above

23. Amit want to add a new column, name Grade
    with the values, 'A','B','A','A','B','A', to an
    existing DataFrame - df. Choose the
    command to do so :
    a. df.colunn= ['A', 'B', 'A', 'A', 'B', 'A']
    b. df['Grade']= ['A', 'B', 'A', 'A', 'B', 'A']
    c. df.loc['Grade']=['A', 'B', 'A', 'A', 'B', 'A']
    d. Both (B) and (C) are correct

24. A DataFrame df is created using the following
    set of commands:
    data = [{"Letters": "a", "Numbers": 1},
             {"Letters": "b", "Numbers": 2},
             {"Letters": "c", "Numbers": 3}]
    df = pd.DataFrame(data)
    How many columns will be there in resulting
    DataFrame?
    a. 3
    b. 2
    c. 1
    d. 0

25. Assume DataFrame- df, with only column 'a'.
    The command, df.loc['b']=['B'], will add a new
    a. Row to the DataFrame
    b. A new column to the DataFrame
    c. Will generate an error
    d. None

Section – B
Section B consists of 24 questions, attempt any 20 questions.

26. In Pandas the function used to delete a column
    in a DataFrame is

    a. remove
    b. delete
    c. drop
    d. cancel

27. The Correct method to change the value in a
    DataFrame – df, at row with index 3 and
    column heading 'UT2' , to 40, is

    a. df.loc['UT2', 3]=40
    b. df.loc['3', 'UT2']=40
    c. df.loc[3,'UT2']=40
    d. df.loc[UT2,3]= 40

28. Write the output of the following statement sequence:
```
import pandas as pd
S=pd.Series([10,20,30,40,50],['A','B','C','D','E'])
print(S[2:6])
```
a. C   30
   D   40
   E   50
b. B   20
   C   30
   D   40
   E   50
c. 'B'   20
   'C'   30
   'D'   40
   'E'   50
d. None of the above

29. A function that can help to add a new row in an existing DataFrame is
a. loc( )
b. add( )
c. addrow( )
d. DataFrame does not allow addition of rows

30. Mitesh uses the following command to add a new column to an existing DataFrame DF.
DF.insert(2, 'Total', 100),
What is the purpose of first argument '2' in the above command?
a. It adds the new column 2 times in the resultant DataFrame
b. It avoids duplicate values in the resultant Dataframe
c. The new column at 2nd indexed location.
d. This is wrong argument,, which must not be supplied.

31. The argument used to display color marks or blocks, each representing a series in plot area is
a. marks
b. markers
c. legends
d. none of the above

32. Which of the following will create a Bar Chart with horizontal bars
a. bar( )
b. bar(horizontal= True)
c. barh( )
d. bar chart with horizontal bars is not possible

33. Where does a plot get stored, if we do not provide any path or location for storage, while saving a plot using savefig() function?

a. At same location where last plot was stored, whose location was provided.
b. Default python folder of the system
c. At a random location
d. System gives an error and ask for location

34. The attribute used with plot function to identify a series in plot area is
a. name
b. ide
c. label
d. none of the above

35. Ajay used the following command to plot a line graph. Predict the shape of the graph that will appear
plt.plot ([1, 2, 3, 4 ,5], [10, 10, 10, 10, 10])
a.   Straight Horizontal Line
b.   Straight Vertical Line
c.   Curved path
d.   Not possible to predict

36. Assume the following command set, What will be the result of this command?
plt.plot()
plt.show()

a. Error
b. An empty plot area will be displayed
c. An random graph will be generated
d. None of the above

37. Pushpa the student of class 12th has been assigned a code to create a Pandas series S1 as shown below

a	110
b	200
c	300
d	400
e	500

   Help him to identify the correct statement that can be used to extract the value with the index c:
   a. print(S1[c])
   b. print(S1['c'])
   c. print('S1'[c])
   d. None of the above

38. Sukriti build the following DataFrame to keep a track of prizes won by the various houses on the sports day.

	house	First	Second	Third
0	Chenab	5	7	6
1	Ganges	10	5	4
2	Jamuna	8	13	15
3	Jhelum	12	9	12
4	Ravi	5	11	10
5	Sutlej	10	5	3

   Write python code to display the records in reverse order. Assume DataFrame Name to be DF
   a. print(DF[: : -1])
   b. print(DF.iloc[: -1])
   c. print(DF.reverse())
   d. print(DF[-1:]+DF[: -1])

39. Zeenat has created the following data frame DF1 to keep track of data RNO, Name Marks1, Marks2 for various student of a class where row index are taken as the default values.

RNO	Name	Marks1	Marks2
1	Swapnil Sharma	30	50
2	Raj Jain Patra	75	45
3	Krishan Kumar	85	95
4	Gopal Jan	90	95

Which is the following option will give 90, 95 as the output?

a. print(max(DF1['Marks1', 'Marks2'])
b. print((DF.Marks1.max(), (DF.Marks2.max())))
c. print(DF1['Marks1', 'Marks2'].max())
d. print(DF1[Marks1, Marks2].max())

40. Naman has created the following data frame 'Climate' to record the data about climatic condition of four years.

Year	MaxTemp	MinTemp	Rainfall
2017	32	21	123
2018	33	22	140
2019	35	21	135
2020	34	23	160

   Display temperature difference between MaxTemp and MinTemp for all the rows in a data frame.

   a. print(Climate['MaxTemp']-['MinTemp'])
   b. print(Climate['MaxTemp']-Climate['MinTemp'])
   c. print(['MaxTemp']-Climate['MinTemp'])
   d. print(Climate.(MaxTemp-MinTemp))

41. **Assertion**: It is suggested to show marker on line chart
   Reason: Data of a line chart may sometime leads to straight lines, which may result in loss of data points

   a. Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.
   b. The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.
   c. Our Assertion is true but the Reason is false.
   d. The statement of the Assertion is false but the Reason is True

42. **Assertion** : Pandas Series is useful only when we have one dimensional data
    Reason: Pandas Series, allow only homogeneous data, i.e. data of only one data type.

    a. Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.
    b. The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.
    c. Our Assertion is true but the Reason is false.
    d. The statement of the Assertion is false but the Reason is True

43. **Assertion**: One should avoid using all Microsoft Products.
    Reason: Almost all Microsoft products are Proprietary and hence require monitory expenses, before they can be used.

    a. Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.
    b. The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.
    c. Our Assertion is true but the Reason is false.
    d. The statement of the Assertion is false but the Reason is True

44. Siddhant received an email from an unknown source claiming he has won a reward of Rs. Five lakh. He need to click on a link and provides some information to claim award, he is a victim of :
    a. Cyber Bullying
    b. Virus attack
    c. Trojan Attack
    d. Phishing

45. Anita has installed a strong anti-virus on her laptop. She is sure that now she cannot be a victim of any cybercrime. Anita is
    a. 100% correct in her thinking
    b. Correct, if she keep updating her antivirus regularly
    c. Correct, till she is using websites hosted from Indian Servers.
    d. Not correct, as antivirus protects only from virus.

46. Neha wants an Open Source Browser for her new laptop. Help her identify one from the following :
    a. Chrome
    b. Netflix
    c. Mozilla Firefox
    d. Internet Explorer

47. _____ are the programs that deliver unwanted ads to our computer system.
    a. Malware
    b. Spamming
    c. Hardware
    d. Adware

48. Which of the following are Net Etiquette?
    a. Be Ethical
    b. Be Respectful
    c. Be Responsible
    d. All of the above

49. The branch of ICT that allows selling or buying things online is known as _____
    a. E-Commerce
    b. E-Shopping
    c. E-Learning
    d. E-Cart

Section – C
Section C consists of 06 questions, attempt any 05 questions.

India Agro Sales is an agro products manufacturing Company. They produce and market five of products namely – Product A, Product B, Product C, Product D, and Product E. Vijay is working as a Production Analyzer in the company. To keep a track of the production of various product from 2014 to 2017, he has created the following dataframe-Products

	2014	2015	2016	2017
Product A	100.5	12000	20000	50000
Product B	150.8	18000	50000	60000
Product C	200.9	22000	70000	70000
Product D	30000	30000	100000	80000
Product E	40000	45000	125000	90000

Help him perform the following task

50. Display the row labels of Sales.
    a. print(Product.index())
    b. print(Product.index)
    c. print(Profuct.Show_index)
    d. print(Profuct.Show_index())

51. Display the last two rows of Sales.
    a. print(Product.last(2))
    b. print(Product.end(2))
    c. print(Product.tail(2))
    d. print(Product.final(2))

52. Display sales of Product C in 2015.
    a. print(Product.loc['Product C','2015'])
    b. print(Product.iloc['Product C','2015'])
    c. print(Product.loc['Product C',2015])
    d. print(Product.iloc[2015, 'Product C',])

53. Display all Production values for Product B.
    a. print(Product.loc(Product B))
    b. print(Product.loc['Product B'])
    c. print(Product.iloc['Product B'])
    d. print(Product.loc(Product B))

54. Display Production of all Products in 2016.
    a. print('product['2016']')
    b. print(product['2016'])
    c. print(product.iloc(2016))
    d. print(product.loc['2016'])

55. Add a new column 2019 with all None values.
    a. Product['2019']=None
    b. product.insert(4,'2019',None)
    c. both a and b will work
    d. adding of new column is not possible in DataFrame

0-O-o- Best of Luck –o-O-0

KVS RO JAIPUR REGION
Sample Question Paper 3
Term-I
Subject: Informatics Practices (Code-065) Class – XII

Time Allowed: 90 minutes   **Maximum Marks: 35**

Sample Paper Set-3

Answer Key:

Q.No	Answer	Q.No	Answer	Q.No	Answer	Q.No	Answer	Q.No	Answer	Q.No	Answer
1	B	11	C	21	C	31	C	41	A	51	C
2	C	12	D	22	B	32	C	42	A	52	C
3	C	13	C	23	B	33	B	43	D	53	B
4	C	14	B	24	B	34	C	44	D	54	B
5	D	15	C	25	A	35	A	45	D	55	C
6	A	16	B	26	C	36	B	46	C		
7	A	17	D	27	C	37	D	47	D		
8	B	18	D	28	A	38	A	48	D		
9	A	19	A	29	A	39	A	49	A		
10	C	20	D	30	C	40	B	50	B		