مـــدرسـة دلهـــي الخـاصـة ذ.م.م.
DELHI PRIVATE SCHOOL L.L.C.
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DPS SHARJAH

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PRE BOARD I EXAMINATION (2021-22)
TERM I -SET B

Subject: INFORMATICS PRACTICES (H) **Max. Marks:35**

Grade: XII **Time:90 Mnts**

Name: **Section:** **Roll No:**

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**

Section A
(Attempt any 20 questions)

1. To display last three rows of a Series object S, you may write _____.

a. head(4) **b.** tail(3)

c. tail(4) **d.** head(3)

2. Code to get the series S in reverse order

a. S[: : 1] **b.** S[: : -2]

c. S[: : -1] **d.** All of the above

3. While accessing the column from the data frame, we can specify the column name. In case column does not exist, which type of error it will raise.

a. Key Error **b.** Name Error

c. Syntax Error **d.** Runtime Error

4. CSV stands for

a. Comma Separated Variables **b.** Comma Space Values

c. Column Separated Values **d.** None of the above

5. Which attribute of dataframe is used to perform the transpose operation on a dataframe?

a. Transpose **b.** T

c. Trans **d.** Ndim

6. A copyright protects which of the following:

a. The words in a novel **b.** Similar storyline expressed in different words

c. The idea behind the story line of the novel **d.** Using the same names of the characters in a different novel.

7. Taking passages from multiple sources, piecing them together, and turning in the work as your own is an example of

a. Copyright Infringement
b. Plagiarism
c. Trademark Infringement
d. Patent Stealing

8. IPR stands for _____

a. Individual Property Right
b. Intelligent Property Right
c. Intellectual Property Right
d. Intellectual Property Resources

9. A photograph, Software code for a website, Architectural plans and a song are a few examples of work that can be protected by getting

a. Copyright
b. Trade license
c. Patent
d. Agreement

10. CC (in reference to public license) stands for _____

a. Creative Commons
b. Creative Comments
c. Common Creatives
d. Creative Culture

11. Which of the following is not true for dataframe

a. Can store heterogenous data
b. Data is mutable where as size is unmutable
c. Is a 2 dimensional data structure
d. Columns contain same type of data for each row

12. To delete a column from a dataframe D, the command is:

a. D.del(Column name)
b. d.pop(Column name)
c. del D(Column name)
d. pop D(Column name)

13. To access the third to fifth elements of a dataframe D the command is:

a. D[2:]
b. D[2:5]
c. D[3:5]
d. D[2:6]

14. For the dataframe DF shown below, the command that will display the record of Ali and Aru is

	EName	Sal	Allow
0	Ali	16000	2000
1	Aru	17545	2500
2	Danish	42000	2900
3	Bilal	25000	3000

a. DF[-4:-2]
b. DF[:-2]
c. DF[:2]
d. All of the above

15. To create an index for an existing Dataframe DF the correct command is:

i. DF.index =[‘A’, ‘B’, ‘C’, ‘D’, ‘E’]

ii. DF.Index =‘A’, ‘B’, ‘C’, ‘D’, ‘E’

iii. DF.index = [x for x in range(5)]

a. i) and iii)
b. only i)
c. i) and ii)
d. i), ii) and iii)

16. If the dataframe D contains the following, the command print(D['Acc': 'IP'] ['Anil']) will display

	Anil	Amit	Akhil	Amrit
Math	12	33	12	22
Acc	20	22	33	43
B. St	30	55	44	34
IP	24	25	34	45
Eng	55	65	67	66

a) Acc 20 B. St 30 IP 24 Name: Anil, dtype: int64	b) Acc 20 B. St 30 Name: Anil, dtype: int64
c) Anil Amit Akhil Amrit Acc 20 22 33 43 B. St 30 55 44 34 IP 24 25 34 45	d) Acc 20 IP 24 Name: Anil, dtype: int64

17. For the dataframe created using the commands given below, the incorrect command to give columns names is:

```
import pandas as pd
List1=[["Reeta", 20], ["Meeta", 22], ["Geeta",22], ["Neeta",20]]
DF = pd.DataFrame(List1)
```

a. DF.column['Name','Age']

b. DF.columns=('Name','Age')

c. DF.columns=['Name','Age']

d. DF.columns='Name','Age'

18. What will be displayed if the dataframe DF is printed

```
import pandas as pd
List1=[["Reeta", 20], ["Meeta", 22], ["Geeta",22], ["Neeta",20]]
DF = pd.DataFrame(List1)
```

a.

```
      0   1
0 Reeta  20
1 Meeta  22
2 Geeta  22
3 Neeta  20
```

b.

```
   Reeta  Meeta  Geeta  Neeta
0     20     22     22     20
```

c.

```
           0
Reeta     20
Meeta     22
Geeta     22
Neeta     20
```

d.

```
          0
20 Reeta
22 Meeta
22 Geeta
20 Neeta
```

19. Using the dataframe given below, the command to print the records of students aged 20 is

	Name	Age	Mode
0	Reeta	20	Onsite
1	Meeta	22	Online
2	Geeta	22	Online
3	Neeta	20	Onsite

a. print(DF.Age==20]
b. print(DF[DF[Age]==20])
c. print(DF[DF.Age==20])
d. print(DF[DF['Age']=20]

20. Using the dataframe given below, the command DF['Name'][DF.Age==DF.Age.max()]

	Name	Age	Mode
0	Reeta	20	Onsite
1	Meeta	22	Online
2	Geeta	22	Online
3	Neeta	20	Onsite

a. Error

b.
```
1    Meeta
2    Geeta
Name: Name, dtype: object
```

c.
```
1  Meeta   22  Online
2  Geeta   22  Online
Name: Name, dtype:object
```

d.
```
1    Reeta
2    Geeta
Name: Name, dtype: object
```

21. Pandas is not used for
a. Data analysis
b. Data importing
c. Data Visualization
d. Data Manipulation

22. The command to give a name to index in a series 'Student' is
a. Student.name = 'SNO'
b. Student.index = 'SNO'
c. Student.index.Name= 'SNO'
d. Student.index.name = 'SNO'

23. From the following Series, the command to print 20,40 and 50 is:

```
import pandas
P= pandas.Series([10,20,30,40,50,60], index =['a','b','c','d', 'e', 'f'])
```

a. print(P)
b. print(P['b':'e'])
c. print(P['b','d','e'])
d. P[['b','d','e']]

24. The count attribute of the series returns
a. Number of values in the series
b. Number of NaN values in the series
c. Number of numeric values in the series
d. Number of non NaN values in the series

25. John wants to create a data series for the months and number of days. He has created two lists as shown in the code. Give the correct command to create a series that contains the names of the months as index and days as values

```
import pandas as pd
X=['Jan','Feb','Mar','Apr']
Y=[31,28,31,30]
```

a. D=pd.Series(X,Y)
b. D=pd.Series(X,index = Y)
c. D=pd.Series(Y,X)
d. D=Series(X,index = Y)

Section B
(Attempt any 20 Questions)

What will be the output of the following code:

26.
```
import pandas as pd
s = pd.Series([1,2,3,4,5],index=['p','q','r','s','t'])
print(s>2)
```

a.
```
r  True
s  True
t  True
dtype: bool
```

b.
```
p  False
q  False
r  True
s  True
t  True
dtype: bool
```

c.
```
r  3
s  4
t  5
dtype: int64
```

d. error

27. A= pd.Series(range(100,500,100)) command create

a.
```
0  100
1  200
2  300
3  400
4  500
dtype: int64
```

b.
```
a  100
b  200
c  300
d  400
e  500
dtype: int64
```

c.
```
0  100
1  200
2  300
3  400
dtype: int64
```

d.
```
a  100
b  200
c  300
d  400
dtype: int64
```

28. To sort the series X in ascending order of its values and store it into series Y, the correct command is

a. Y=sort(X)
b. Y=X.sort()
c. Y=X.sort.values()
d. Y=X.sort_values()

29. From the following Series, the command to print 20,40 and 50 is:

```
import pandas
P= pandas.Series([10,20,30,40,50,60], index =['a','b','c','d', 'e', 'f'])
```

a. print(P) **b.** print(P[‘b’:’e’])

c. print(P['b','d','e']) **d.** P[['b','d','e']]

30. When we create a series from dictionary then the keys of dictionary become _____

a. Index of the series **b.** Caption of the series

c. Value of the series **d.** None of the series

31. Which method is used to explain what each line means in the current figure.

a. legend( ) **b.** save()

c. show( ) **d.** plot()

32. Which of the following method to be used to display the graph.

a. display() **b.** execute()

c. print() **d.** show()

33. Which argument must be set with plotting functions for legend( ) to display the legends ?

a. data **b.** name

c. Label **d.** sequence

34. Inorder to change the histogram into horizontal one _____ parameter can be used.

a. orientation **b.** cumulative

c. direction **d.** histtype

35. The data points plotted on a graph are called

a. points **b.** pointers

c. markers **d.** plotters

36. Which of the following is **not** a valid plotting function of pyplot ?

a. hist() **b.** barh()

c. plot() **d.** line( )

37. Which of the following can’t be the linestyle in the plot() function?

a. Solid **b.** dashdot

c. straight **d.** dotted

38 Assertion(A): To make a Histogram with Matplotlib, we can use the plt.hist() function.

Reasoning(R): The bin parameter is compulsory to create histogram.

a. A is True R is False **b.** A is False R is True

c. Both A and R are True **d.** Both A and R are False

39. To plot a horizontal bar chart_____ function is used

a. bar() **b.** hist()

c. barh() **d.** hbar()

40. Which function is used to save a line graph?

a. plot() **b.** savefule()

c. savefig() **d.** figsave()

41 _____ are the trails of your activity on the internet.

a. Data Footprints **b.** Digital Footprints

c. Plagiarism **d.** Digital Data

42. Sharing personal or private information about someone else causing embarrassment or humiliation is termed as _____

a. Cyber bullying
b. Phishing
c. Identity theft
d. Cyber Stalking

43. The act of tricking a recipient into clicking a malicious link, which leads to the installation of malware, the freezing of the system as part of a ransomware attack or the revealing of sensitive information is termed as:

a. Cyber bullying
b. Phishing
c. Identity theft
d. Cyber Stalking

44. Websites that install cookies on your devices, apps and websites that use your geolocation, and social media that uses your likes, shares and comments to profile you are examples of

a. Active digital footprints
b. Current digital footprints
c. Passive digital footprints
d. Secret digital footprints

45. A type of intellectual property consisting of a recognizable sign, design, or expression which identifies products or services of a particular source from those of others _____

a. trademark
b. copyright
c. Keeping offline
d. patent

46. Proprietary software is a software which is available _____

a. free of charge
b. on paying license fee
c. free for first year only
d. None of the above

47. An organisation purchases new computers every year and dumps the old ones into the local dumping yard. Write the name of the most appropriate category of waste that the organisation is creating every year, out of the following options

a. Solid Waste
b. Commercial Waste
c. E-Waste
d. Business Waste

48. In given code dataframe 'D1' has _____ rows and _____ columns.

```
import pandas as pd
LoD = {"Name" : ["Amit", "Anil","Ravi"], "RollNo" : [1,2,3]}
D1 = pd.DataFrame(LoD)
```

a. 3,3
b. 3,2
c. 2,3
d. None of the above

49. Rhan wants to set all the values to 0 in data frame, choose the right command to do so

a. df=0
b. df[]=0
c. df[:]=0
d. df[:]==0

Section C

Section C consists of 6 Question (50 to 55). Attempt any 5 questions.

Case Study

A new student is coding a program to work with the given dataframe.

```
Ser1 = pd.Series({"Chess": 'Shiela', "Tennis":'Derek',"Cricket":'Rodrek'})
Ser2 = pd.Series({"Tennis":225,"Chess":330,"Football":350, "Cricket":200})
DF = pd.DataFrame({"Coach":Ser1,"Fee":Ser2})
```

Based on the above commands, answer the questions that follow:

50. What will be displayed if the data frame DF is printed?

a.
```
    Game   Coach  Fee
0   Chess  Shiela 230
1   Tennis Derek  350
2   Cricket Rodrek 200
3  Football   250
```

b.
```
    Game   Coach  Fee
0   Chess  Shiela 230
1   Tennis Derek  350
2   Cricket Rodrek 200
3  Football   NaN 250
```

c.
```
          Coach  Fee
Chess     Shiela 330
Cricket   Rodrek 200
Football  NaN    350
Tennis    Derek  225
```

d.
```
          Coach  Fee
0 Chess   Shiela 330
1 Cricket Rodrek 200
2 Football NaN   350
3 Tennis  Derek  225
```

51. To add a new game 'VolleyBall' with coach 'Tulla' and Fee as 220, the command is

a. DF['VolleyBall']=["Tulla",220]

b. DF['VolleyBall']=("Tulla",220)

c. DF.loc['VolleyBall']=("Tulla",220)

d. DF.iloc['BaseBall']=("Appu",320)

52. To add a new column Discount with values as 10% of the Fee, the command is

a. DF.Discount=DF.Fee*.10

b. DF['Discount']=DF['Fee']*.10

c. DF[Discount]=DF.'Fee'*.10

d. DF['Discount']=DF[Fee]*.10

53. Which command will print the fee and discount.

a. print('fee,discount')

b. print(DF['Fee','Discount'])

c. print(['fee,discount'])

d. print(DF[['Fee','Discount']])

54. The ___ attribute provides the number of elements present in the DataFrame.

a. column

b. count

c. size

d. length

55. The command to display the details of games whose fees less than 250

a. print(DF['Fee']<250)

b. print(DF[DF[Fee]<250])

c. print(DF[DF['Fee']<250])

d. None of the above

***