



केन्द्रीय विद्यालय संगठन, जयपुर संभाग

KENDRIYA VIDYALAYA SANGATHAN  
JAIPUR REGION

QUESTION BANK OF MULTIPLE CHOICE QUESTIONS  
CLASS–XII

SUBJECT–INFORMATICS PRACTICES  
SESSION–2021-22 (TERM-I)



## **CHIEF PATRON**



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| GROUP   | NAME OF PGT COMPUTER SCIENCE | NAME OF KV                      | WORK ASSIGNED FOR 3 DAYS WORKSHOP  |
|---------|------------------------------|---------------------------------|--|
| GROUP-1 | MANISH SONI                  | NO. 1 AFS SURATGARH             | Introduction to Python libraries- Pandas, Matplotlib.<br>● Data structures in Pandas - Series and data frames. Series: Creation of series from dictionary, scalar value; mathematical operations; series attributes, head and tail functions; selection, indexing and slicing.                   |
|         | MS. KULDEEP KAUR             | NO.2 AFS JODHPUR                |  |
|         | V D MEENA                    | AVIKANAGAR                      |  |
|         | DR AJAY KUMAR GARG           | K V NO 3 NAL BIKANER            |  |
|         | PRADEEP SWAMI                | JHUNJHUNU                       |  |
| GROUP-2 | VISHAL GOSWAMI               | NO1 BIKANER                     | Data Frames: creation of data frames from dictionary of series, list of dictionaries, text/CSV files, display, iteration. Operations on rows and columns: add (insert /append) , select, delete (drop column and row), rename, Head and Tail functions, indexing using labels, Boolean indexing. |
|         | SATISH CHANDRA JANGIR        | KV NO. 3 JAIPUR                 |  |
|         | PRITHVI RAJ CHOUHAN          | KV NO.1 AFS JODHPUR             |  |
|         | MRS. NIPUN KALRA WALIA       | K V NO 6 JAIPUR                 |  |
|         | RAJESH SUYAL                 | ITARANA                         |  |
| GROUP-3 | NEHA TYAGI                   | KV NO 3 JAIPUR                  | Data Visualization<br>● Data Visualization: Purpose of plotting, drawing and saving of plots using Matplotlib (line plot, bar graph, histogram). Customizing plots: adding label, title, and legend in plots.  |
|         | MRS. MAMTA JAIN              | BHILWARA                        |  |
|         | ADARSH BHATNAGAR             | KV NO.2, BIKANER                |  |
|         | MR. AAKIB JAVED              | BSF JODHPUR                     |  |
|         | PREM PRAKASH MEENA           | ALWAR                           |  |
| GROUP-4 | BIRBAL JAT                   | DABLA                           | Digital footprint, net and communication etiquettes,<br>● Data protection, intellectual property rights (IPR), plagiarism, licensing and copyright,<br>● Free and open source software (FOSS)  |
|         | PANKAJ MEHRA                 | KV JHALAWAR                     |  |
|         | P KACHHAWA                   | KV NO 2 AJMER                   |  |
|         | SH VIJAY KUMAR GARG          | KV GANGAPUR CITY                |  |
|         | PINKY KUMARI MEENA           | KV NO2 ARMY JODHPUR             |  |
| GROUP-5 | AMIT KUMAR JAIN              | NO.4 JAIPUR                     | Cybercrime and cyber laws, hacking, phishing, cyber bullying, overview of Indian IT Act.<br>● E-waste: hazards and management. Awareness about health concerns related to the usage of technology.   |
|         | GHANSHYAM CHITARA            | AFS UTTARLAI                    |  |
|         | VIKRAM SINGH PAREVA          | KV CHITTORGARH                  |  |
|         | GAJRAJ MEENA                 | KV KARAUJI                      |  |
|         | KAVITA ACHARYA               | KV BANSWARA                     |  |
| GROUP-6 | SANDEEP ARORA                | KENDRIYA VIDYALAYA NO.1 UDAIPUR | 3 Sample Question Paper for Term-I as per CBSE pattern   |
|         | MR. ARVIND KUMAR             | KV NO. 1, JAIPUR                |  |
|         | SH. P. R. GOLIA              | KV NASIRABAD                    |  |
|         | MRS. PREETI MEHARISHI        | KV AFS JAISALMER                |  |
|         | VIJETA DARA                  | NO 5 ( I SHIFT) JAIPUR          |  |
| GROUP-7 | DILIP SINGH                  | BANAR JODHPUR                   | 3 Sample Question Paper for Term-I as per CBSE pattern   |
|         | SH. PRAVEEN KUMAR YADAV      | SAWAI MADHOPUR                  |  |
|         | USHA BENIWAL                 | K V NO 2, JAIPUR                |  |
|         | KRISHAN KUMAR KUMAWAT        | KV 1 AJMER                      |  |

|  |         |                             |  |
|--|---------|-----------------------------|--|
|  | NAVNEET | KENDRIYA VIDYALAYA<br>CHURU |  |
|--|---------|-----------------------------|--|

## Python Pandas:-Series

Q1. Which of the following is/ are libraries in Python?

- a. NumPy
- b. Pandas
- c. Matplotlib
- d. All of the above

Q2. Which of the following libraries allow to manipulate, transform and visualize data easily and efficiently?

- a. Pandas
- b. NumPy
- c. Matplotlib
- d. All of the above

Q3. Minimum number of arguments, we require to pass in pandas series?

- a. 0
- b. 1
- c. 2
- d. 3

Q4. PANDAS stands for \_\_\_\_\_

- a. Panel Data Analysis
- b. Panel Data analyst
- c. Panel Data
- d. Panel Dashboard

Q5. \_\_\_\_\_ is an important library used for analysing data.

- a. Math
- b. Random
- c. Pandas
- d. None of the above

Q6. We can analyze the data in pandas with:

- a. Series
- b. DataFrame
- c. Both of the above
- d. None of the above

Q7. Important data structure of pandas is/are \_\_\_\_\_

- a. Series
- b. Data Frame
- c. Both of the above
- d. None of the above

Q8. Which of the following command is used to install pandas?

- a. pip install pandas
- b. install pandas
- c. pip pandas
- d. None of the above

Q9. Python pandas was developed by?

- a. Guido van Rossum
- b. Travis Oliphant
- c. Wes McKinney

d. Brendan Eich

Q10. A \_\_\_\_\_ is a one-dimensional array.

- a. Data Frame
- b. Series
- c. Both of the above
- d. None of the above

Q11. Which of the following statement is wrong?

- a. We can create Series from Dictionary in Python.
- b. Keys of dictionary become index of the series.
- c. Order of indexes created from Keys may not be in the same order as typed in dictionary.
- d. All are correct

Q12. A Series by default have numeric data labels starting from \_\_\_\_\_.

- a. 3
- b. 2
- c. 1
- d. 0

Q13. Result of an operation between unaligned Series will have \_\_\_\_\_ of indexes involved.

- a. intersection
- b. union
- c. total
- d. all of the mentioned

Q14. The data label associated with a particular value of Series is called its \_\_\_\_\_

- a. Data value
- b. Index
- c. Value
- d. None of the above

Q15. Which of the following module is to be imported to create Series?

- a. NumPy
- b. Pandas
- c. Matplotlib
- d. None of the above

Q16. Which of the following function help to create Series?

- a. series( )
- b. Series( )
- c. createSeries( )
- d. None of the above

Q17. Write the output of the following :

```
import pandas as pd
series1 = pd.Series([40,50,60])
print(series1)
```

- a.  
0 40  
1 50  
2 60  
dtype: int64

b.  
40  
50  
60  
dtype: int64

c.  
0  
1  
2  
dtype: int64

d. None of the above

Q18. When you display any series then the left most column is showing \_\_\_\_\_ value.

- a. Index
- b. Data
- c. Value
- d. None of the above

Q19. How many values will be there in array1, if given code is not returning any error?

series4 = pd.Series(array1, index = ["Jan", "Feb", "Mar", "Apr"])

- a. 1
- b. 2
- c. 3
- d. 4

Q20. Which of the following statement will create an empty series named "S1"?

- a. S1 = pd.Series(None)
- b. S1 = pd.Series( )
- c. Both of the above
- d. None of the above

Q21. How many elements will be there in the series named "S1"?

```
>>> S1 = pd.Series(range(5))  
>>> print(S1)
```

- a. 5
- b. 4
- c. 6
- d. None of the above

Q22. When we create a series from dictionary then the keys of dictionary become \_\_\_\_\_

- a. Index of the series
- b. Value of the series
- c. Caption of the series
- d. None of the series

Q23. Write the output of the following :

```
S1=pd.Series(14, index = ['a', 'b', 'c'])  
print(S1)
```

- a.  
a 14  
b 14  
c 14  
dtype: int64

b.  
a 14  
dtype: int64

- c. Error
- d. None of the above

Q24. Write the output of the following:

```
S1=pd.Series(14, 7, index = ['a', 'b', 'c'])  
print(S1)
```

- a.  
a 14  
b 7  
c 7  
dtype: int64

b.  
a 14  
b 7  
dtype: int64

- c. Error
- d. None of the above

Q25. Write the output of the following:

```
S1=pd.Series([14, 7, 9] ,index = range(1, 8, 3))  
print(S1)
```

- a.  
14 1  
7 4  
9 7  
dtype: int64

b.  
1 14  
4 7  
7 9  
dtype: int64

- c. Error
- d. None of the above

Q26. Which of the following code will generate the following output?

```
Jan 31  
Feb 28  
Mar 31  
dtype: int64
```

- a.  
import pandas as pd  
S1 = pd.Series(data = [31,28,31],  
index=["Jan","Feb","Mar"])  
print(S1)

- b.  
import pandas as pd  
S1 = pd.Series([31,28,31],  
index=["Jan","Feb","Mar"])  
print(S1)
- c. Both of the above
- d. None of the above

Q27. 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

Q28. What type of error is returned by following code?

```
import pandas as pd
S1 = pd.Series(data = (31, 2, -6),
index = [7, 9, 3, 2])
print(S1)
```

a.

SyntaxError

b.

IndexError

c.

ValueError

d.

None of the above

Q29. Write the output of the following:

```
import pandas as pd
S1 = pd.Series(data = 2*(31, 2, -6))
print(S1)
```

a.

```
0 31
1 2
2 -6
dtype: int64
```

b.

```
0 31
1 2
2 -6
3 31
4 2
dtype: int64
```

c.

```
0 31
1 2
2 -6
3 31
dtype: int64
```

d.

```
0 31
1 2
2 -6
3 31
4 2
5 -6
dtype: int64
```

Q30. We can imagine a Pandas Series as a \_\_\_\_\_ in a spread sheet

a.

Column

b.

Cell

c.

Table

d.

None of the above

### Answer Key:

| Q. No. | Ans | Q. No. | Ans |
|--------|-----|--------|-----|
| 1      | d   | 16     | b   |
| 2      | d   | 17     | a   |
| 3      | b   | 18     | a   |
| 4      | c   | 19     | d   |
| 5      | c   | 20     | c   |
| 6      | c   | 21     | a   |
| 7      | c   | 22     | a   |
| 8      | a   | 23     | a   |
| 9      | c   | 24     | c   |
| 10     | b   | 25     | b   |
| 11     | d   | 26     | c   |
| 12     | d   | 27     | a   |
| 13     | b   | 28     | c   |
| 14     | b   | 29     | d   |
| 15     | b   | 30     | a   |

## **Python Pandas:-Series**

Q31. Write the output of the following:

```
import pandas as pd
series2 = pd.Series(["Kavi","Shyam","Ravi"],
index=[3,5,1])
print(series2 > "S")
```

- a. 3 False  
5 False  
1 False  
dtype: bool
- b. 3 False  
5 True  
1 False  
dtype: bool
- c. 3 True  
5 True  
1 True  
dtype: bool
- d. None of the above

Q32. Which of the following statement is correct for importing pandas in python?

- a. import pandas
- b. import pandas as pd
- c. import pandas as pds
- d. All of the above

Q33. What type of error is returned by following statement?

```
import pandas as pnd
pnd.Series([1,2,3,4], index = ['a','b','c'])
```

- a. SyntaxError
- b. IndexError
- c. ValueError
- d. None of the above

Q34. Which attribute is used to give user defined labels in Series?

- a. index
- b. data
- c. values
- d. None of the above

Q35. Fill in the blank to get the output as 3.

```
import pandas as pnd
S1=pnd.Series([1,2,3,4], index = ['a','b','c','d'])
print(S1[_____])
```

- a. 'c'
- b. 2
- c. c
- d. All of the above

Q36. Write the statement to get NewDelhi as output using positional index.

```
import pandas as pd
S1 = pd.Series(['NewDelhi', 'WashingtonDC', 'London', 'Paris'],
index=['India', 'USA', 'UK', 'France'])
```

- a. print(S1[0])
- b. print(S1['India'])
- c. Both of the above
- d. print(S1.India)

Q37. We can access elements in Series by using \_\_\_\_\_ index and \_\_\_\_\_ index.

- a. Numeric, labelled
- b. Positional, Naming
- c. Positional, labelled
- d. None of the above

Q38. Write the output of the following:

```
import pandas as pd
S1 = pd.Series(['NewDelhi', 'WashingtonDC', 'London', 'Paris'],
index=['India', 'USA', 'UK', 'France'])
print(S1['India', 'UK'])
```

- a. India NewDelhi  
UK London  
dtype: object
- b. India NewDelhi  
UK Washington  
dtype: object
- c. Error
- d. None of the above

Q39. Which of the following statement will print Series 'S1' in reverse order?

- a. print(S1[: : 1])
- b. print(S1[: : -1])
- c. print(S1[-1: : 1])
- d. print(S1.reverse( ))

Q40. How many values will be modified by last statement of given code?

```
import pandas as pd
S1 = pd.Series(['NewDelhi', 'WashingtonDC', 'London', 'Paris'],
index=['A', 'B', 'C', 'D'])
S1['A' : 'C'] = 'ND'
```

- a. 1
- b. 2
- c. 3
- d. 4



Q41. How many values will be modified by last statement of given code?

```
import pandas as pd
S1 = pd.Series(['NewDelhi', 'WashingtonDC',
'London', 'Paris'],
index=['A', 'B', 'C', 'D'])
S1[1 : 3] = 'ND'
```

- a. 1
- b. 2
- c. 3
- d. 4

Q42. Which of the following attribute assign name to the Series?

- a. name
- b. index.name
- c. size
- d. Series.name

Q43. Which of the following attribute return total number of values in Series 'S1'?

- a. size
- b. values
- c. index
- d. None of the above

Q44. Which of the following attributes returns True if there is no value in Series?

- a. index
- b. size
- c. empty
- d. values

Q45. Which of the following attributes returns all the values of Series?

- a. size
- b. index
- c. name
- d. values

Q46. Write the output of the following code:

```
import pandas as pd
S1=pd.Series()
print(pd.Series().empty)
```

- a. True
- b. False
- c. Error
- d. None of the above

Q47. Write the output of the following code:

```
import pandas as pd
S1=pd.Series([1,2,3,4])
```

```
S2=pd.Series([7,8])
S3=S1+S2
print(S3.size)
```

- a. 2
- b. 4
- c. 6
- d. Error

Q48. Which of the following statement shows first five values of Series 'S1'?

- a. S1.head( )
- b. S1.head( 5 )
- c. Both of the above
- d. None of the above

Q49. Write the output of the following:

```
import pandas as pd
S1=pd.Series([1,2,3,4])
S2=pd.Series([7,8])
print((S1+S2).count())
```

- a. 6
- b. 4
- c. 2
- d. 0

Q50. Which of the following returns number of non-NaN values of Series?

- a. count
- b. size
- c. index
- d. values

Q51. Write the output of the following:

```
import pandas as pd
S1=pd.Series([1,2,3,4])
S2=pd.Series([7,8,9,10])
S2.index=['a','b','c','d']
print((S1+S2).count())
```

- a. 8
- b. 4
- c. 0
- d. 6

Q52. We can perform \_\_\_\_\_ on two series in Pandas.

- a. Addition
- b. Subtraction
- c. Multiplication
- d. All of the above

Q53. Which of the following method is used to add two series?

- a. sum( )
- b. addition( )
- c. add( )
- d. None of the above

Q54. Mathematical Operations on two Series object is done by matching \_\_\_\_\_

- a. indexes
- b. values
- c. Both of the above
- d. None of the above

Q55. Which of following statement will display values more than 40 from Series 'S1'?

- a. `>>>S1`
- b. `>>> S1 > 40`
- c. `>>>S1[S1 > 40]`
- d. None of the above

Q56. Which of following statement will return 10 values from the end of the Series 'S1'?

- a. `S1.tail()`
- b. `S1.tail(10)`
- c. `S1.head(10)`
- d. `S1(10)`

Q57. Which of the following are valid operations on Series 'S1'?

- a. `>>> S1 + 2`
- b. `>>> S1 ** 2`
- c. `>>> S1 * 2`
- d. All of the above

Q58. When an operation is carried out on every value of Series object is called \_\_\_\_\_

- a. Scalar Operation
- b. Vector Operation
- c. Both of the above
- d. None of the above

Q59. Which of the following statement will modify the first three values of Series 'S1'?

- a. `S1[0, 1, 2] = 100`
- b. `S1[0 : 3] = 100`
- c. `S1[: 3] = 100`
- d. All of the above

Q60. Following two statements will provide the same output.

`>>>L1 * 2` #L1 is a list  
`>>>S1 * 2` #S1 is a Series

- a. True
- b. False

#### Answer Key:-

| Q. No. | Ans | Q. No. | Ans |
|--------|-----|--------|-----|
| 31     | b   | 46     | a   |
| 32     | d   | 47     | b   |
| 33     | c   | 48     | c   |
| 34     | a   | 49     | c   |
| 35     | d   | 50     | a   |
| 36     | a   | 51     | c   |
| 37     | c   | 52     | d   |
| 38     | c   | 53     | c   |
| 39     | b   | 54     | a   |
| 40     | c   | 55     | c   |
| 41     | b   | 56     | b   |
| 42     | a   | 57     | d   |
| 43     | a   | 58     | b   |
| 44     | c   | 59     | d   |
| 45     | d   | 60     | b   |

### Extra Questions

Q1. Which of the following function/method help to create Series?

- a) series( )
- b) Series( )
- c) createSeries( )
- d) None of the above

Q2. To get the number of elements in a Series object, \_\_\_\_\_ attributes may be used.

- a) index
- b) size
- c) itemsize
- d) ndim

Q3. Missing data in pandas is represented through:

- a) NaN
- b) None
- c) Null
- d) Missing

Q4. What will be the output of the above given code?

```
import pandas as pd
s=pd.Series([1,2,3,4,5],index=["ajay",
"pankaj","deepthi","rajesh","ritika"])
print(s["rajesh"])
```

- a) 1
- b) 2
- c) 3
- d) 4

Q5. Which of the following statement will create an empty series named "S1"?

- a) S1 = pd.Series(None)
- b) S1 = pd.Series( )**
- c) Both of the above
- d) None of the above

Q6. To display the first four rows of a Series object, you may write \_\_\_\_\_

- a) head()
- b) tail()
- c) head(4)
- d) tail(4)

Q7. Write the output of the following :

```
S1=pd.Series(14, index = ['a', 'b', 'c'])
print(S1)
```

- a)
- a 14
- b 14
- c 14
- dtype: int64
- b)
- a 14
- dtype: int64
- c) Error
- d) None of the above

Q8. What type of error is returned by following statement?

```
import pandas as pd
s=pd.Series([1,2,3,4], index = ["a","b","c"])
print(s)
```

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

Q9. Way to install the pandas library?

- a) Install pandas
- b) Pandas install python
- c) Python install pandas
- d) None of above

Q10. Which of the following attributes returns all the values of Series?

- a) size
- b) index
- c) name
- d) values

Q11. Write the output of the following code:

```
import pandas as pd
S1=pd.Series()
print(pd.Series().empty)
```

- a) True
- b) False
- c) Error
- d) None of the above

Q12. Write the output of the following code :

```
import pandas as pd
S1=pd.Series([1,2,3,4])
S2=pd.Series([7,8])
S3=S1+S2
print(S3.size)
```

- a) 2
- b) 4
- c) 6
- d) Error

Q13. Which of the following returns number of non-NaN values of Series?

- a) count
- b) size
- c) index
- d) values

Q14. What will be the output for the following code:

```
import pandas as pd
fst=[9,10,11]
ser1=pd.Series(data=fst*2)
print(ser1)
```

- a) 0 9  
1 10  
2 11  
3 9  
4 10  
5 11  
b) 0 18  
1 20  
2 22
- c) Error  
d) None of these
- Q15. Mathematical Operations on two Series object is done by matching \_\_\_\_\_  
a) indexes  
b) values  
c) Both of the above  
d) None of the above
- Q16. When an operation is carried out on every value of Series object is called:  
a) Scalar Operation  
b) Vector Operation  
c) Both of the above  
d) None of the above
- Q17. Which of the following statement is wrong?  
a) We can create Series from Dictionary in Python.  
b) Keys of dictionary become index of the series.  
c) Order of indexes created from Keys may not be in the same order as typed in dictionary.  
d) d. All are correct
- Q18. Which of the following statement sort the Series S1 values in descending order  
a) S1.sort\_values()  
b) S1.sort\_values(ascending=False)  
c) S1.sort\_values(ascending=True)  
d) S1.sort()
- Q19. Which of the following is true?  
a) If data is an ndarray, index must be the same length as data.  
b) Series is a one-dimensional labeled array capable of holding any data type.  
c) Both A and B  
d) None of the above
- Q20. Write the output of the following code:  
import pandas as pd  
Ser2=pd.Series(15,index=range(1,6,2))  
Print(Ser2)  
a) 1 15

- 3 15  
5 15  
b) 1 15  
2 15  
3 15  
4 15  
5 15  
c) Error  
b) None of the above
- Q21. To display the fourth element of a Series object Ser1, you will write  
a) Ser1[2]  
b) Ser1[3]  
c) Ser1[4]  
d) Ser1[:3]
- Q22. Mr.Anuj wanted to access multiple index value from series S1.Which of the following statement is correct for him?  
a) S1.index[0,1,2,3,4]  
b) S1.index(0,1,2,3,4)  
c) S1[0,1,2,3,4]  
d) S1[[0,1,2,3,4]]
- Q23. What will be the output for the following code:  
import pandas as pd  
S=pd.Series([55,20,10,45,50])  
for i in range (S.size):  
if S[i]>15:  
print(S[i],end=" ")  
a) 55 20 45 50  
b) 20 45 50 55  
c) 50 35 20 55  
d) Error
- Q24. While creating a series in which of the following way you must need to specifies the index?  
a) Using a sequence  
b) Using Dictionary  
c) Using ndarray  
d) With a scalar value
- Q25. Pandas is mainly used for  
a) Data Analysis  
b) Data visualization  
c) Data Backup  
d) Data Recovery

**Answer Key:-**

|    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 |
| b  | b  | a  | d  | c  | c  | a  | c  | d  | d  |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| a  | b  | a  | a  | a  | b  | d  | b  | c  | a  |
| 21 | 22 | 23 | 24 | 25 |    |    |    |    |    |
| b  | d  | a  | d  | a  |    |    |    |    |    |

## Python Pandas :: DataFrame

### DATAFRAME CREATION

Q1) In Python Pandas, which function is used to create a dataframe ?

- a) createDF()                      b) dataframe()
- c) DataFrame()                    d) Dataframe()

Q2) Complete the following code –

```
_____ #missing statement
D = {'code': [102, 104, 105], 'ename': ['Arun',
'Geet', 'Amy']}
df1 = pp.DataFrame(D)
print(df1)
```

- a) import pandas
- b) import pandas as pp
- c) import Pandas as pp
- d) import pandas as pd

Q3) A dataframe in Python Pandas can be created using –

- a) A Python dictionary
- b) A scalar value
- c) A List
- d) All of these

Q4) The axis = 0 is used to identify a dataframe's \_\_\_\_\_

- a) rows                      b) columns
- c) datatype                d) values

Q5) The axis = 1 is used to identify a dataframe's \_\_\_\_\_

- a) values                      b) columns
- c) datatype                d) rows

Q6) Missing data in a Dataframe object is represented through –

- a) NULL                      b) None
- c) NaN                        d) <empty>

Q7) The function to create a dataframe from a CSV file is –

- a) to\_csv()                      b) load\_csv()
- c) fetch\_csv                    d) read\_csv()

Q8) From a 4(rows) x 3(columns) size dataframe, we can extract total different series based on index and columns will be

- a) 4                              b) 3
- c) 7                              d) 12

Q9) **Assertion** – DataFrame is a two-dimensional Pandas structure, with ordered collections of columns that can store data of different types.

**Reason** - Dataframe is an array-like structure with two indices or axes – row index (axis = 0) and column index (axis=1). Dataframe is value-mutable as well as size- mutable with heterogeneous data.

- a) Assertion is True & Reason is correct explanation of Assertion
- b) Assertion is True, but Reason is partially True
- c) Assertion is True but Reason is False
- d) Both Assertion and Reason are False

Q10) **Assertion** – Two basic data structure in Python are: Series and Dataframe. But both are different from each other.

**Reason** - Series stores heterogenous data while Dataframe stores homogenous data.

- a) Assertion is True & Reason is correct explanation of Assertion
- b) Assertion is True, but Reason is partially True
- c) Assertion is True but Reason is False
- d) Both Assertion and Reason are False
- e)

**Answer Key:-**

|   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| c | B | d | A | b | c | d | c | a | c  |

### Dataframe display & Iteration

Q.11 Write correct Python statement to display 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> rows and 6<sup>th</sup>, 7<sup>th</sup> columns from a DataFrame Sales.

- a) Sales.loc[2:4,6:7]
- b) Sales.loc[6:7,2:4]
- c) Sales.iloc[2:4,6:7]
- d) Sales.iloc[6:7,2:4]

Q.12 Write correct Python statement to display 2<sup>nd</sup> column of DataFrame DF.

- a) DF[2]
- b) DF[[2]]
- c) DF.loc[:,2]
- d) All of the above

Q.13 Explain the meaning of print(df.iloc[:4]) where df is a dataframe.

- a) It will display first 4 rows of DataFrame df.
- b) It will display 4<sup>th</sup> row of DataFrame df.
- c) It will display last 4 rows of DataFrame df
- d) None of these

Q.14 Which is the correct Python statement to display last 6 rows of DataFrame Item of 10 rows with some columns?

- a) Item.loc[4:9]
- b) Item.loc[9:4]
- c) Item.loc[:10]
- d) Item.loc[:11]

Q.15 Given a DataFrame DF:

|   | Rollno | Name   | Marks |
|---|--------|--------|-------|
| 0 | 101    | Mayank | 89    |
| 1 | 102    | Harish | 91    |
| 2 | 103    | Divya  | 92    |

Write a Python statement to display only name of student of first and second rows.

- a) DF.loc[0:2,'Name']
- b) DF.loc[0:1,0:1]
- c) DF.loc[0:2,1]
- d) DF.loc[1:2,'Name']

Q.16 Write Python statement to display Rollno and Marks column of above DataFrame DF.

- a) DF.loc[:]
- b) DF.loc[1:2,'Rollno':Marks']
- c) DF.loc[:,['Rollno','Marks']]
- d) DF.loc[['Rollno','Marks',:]

Q.17 Write output of the following Python statement for the DataFrame DF given in Q.15.

print(DF.loc[:,1,'Rollno':'Marks'])

a)

|   | Rollno | Name   | Marks |
|---|--------|--------|-------|
| 0 | 101    | Mayank | 89    |

|   |     |        |    |
|---|-----|--------|----|
| 1 | 102 | Harish | 91 |
|---|-----|--------|----|

b)

|   | Rollno | Marks |
|---|--------|-------|
| 0 | 101    | 89    |
| 1 | 102    | 91    |
| 2 | 103    | 92    |

c)

|   | Rollno | Name  | Marks |
|---|--------|-------|-------|
| 2 | 103    | Divya | 92    |

d)

|   | Rollno | Marks |
|---|--------|-------|
| 2 | 103    | 92    |

e)

Q.18 Write output of the following Python code:

```
Import pandas as pd
df=pd.DataFrame([10,20,30])
print(df)
```

a)

|   | 0  | 1  | 2  |
|---|----|----|----|
| 0 | 10 | 20 | 30 |

b)

|   | 0  |
|---|----|
| 0 | 10 |
| 1 | 20 |
| 2 | 30 |

c)

|   | 0  |
|---|----|
| 1 | 10 |
| 2 | 20 |
| 3 | 30 |

d)

|   | 1  | 2  | 3  |
|---|----|----|----|
| 0 | 10 | 20 | 30 |

Q.19 Given a DataFrame Products which shows year wise of Products :

|          | 2018 | 2019 | 2020 |
|----------|------|------|------|
| TV       | 101  | 105  | 108  |
| AC       | 56   | 59   | 62   |
| Computer | 69   | 58   | 74   |
| Laptop   | 120  | 125  | 135  |

Write Python statement to display first two columns of the above DataFrame.

- a) Products[['2018,2019]]
- b) Products.loc[:,2018:2019]
- c) Only a
- d) Both a and b

Q.20 Write Python statement to display last two rows of the above DataFrame Products.

- a) Products.loc[2:]
- b) Products.loc['Computer':'Laptop']
- c) Products.loc[2:3]
- d) Products.loc[:'Laptop']

**Answer Key:-**

|      |      |      |      |      |
|------|------|------|------|------|
| 11 a | 12 d | 13 a | 14 a | 15 d |
| 16 c | 17 a | 18 b | 19 a | 20 b |

**Operation on rows and columns**

Q21 Inplace=True means:-

- (a) Changes will be permanent
- (b) Changes are temporary
- (c) Changes are partial and temporary
- (d) None of all

Q22. Df1.sum() will find

- (a) total of all values of each column
- (b) total of all values of each rows
- (c) count total rows
- (d) count total columns

Q23. To change the 5th column's value at 3rd row as 35 in dataframe DF, you can write \_\_\_\_.

- (a) DF[4, 6] = 35    (b) DF[3, 5] = 35
- (c) DF.at[4, 6] = 35    (d) DF.at[3, 5] = 35

Q24. To delete a column from a DataFrame, you may use \_\_\_\_ statement.

- (a) drop                      (b) del
- (c) both a and b            (d) None of all

Q25. To delete a row from a DataFrame, you may use \_\_\_\_ statement.

- (a) drop                      (b) del
- (c) both a and b            (d) None of all

Q26. Which command will be used to delete 3<sup>rd</sup> and 5<sup>th</sup> rows of the data frame. Assuming the data frame name as DF.

- (a) DF.drop([2,4],axis=0)
- (b) DF.drop([2,4],axis=1)
- (c) DF.drop([3,5],axis=1)
- (d) DF.drop([3,5])

Q27. To display 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> column from the 6<sup>th</sup> to 9<sup>th</sup> rows of a dataframe DF, you can write-----?

- (a) DF.loc[6:9,3:5]                      (b) DF.loc[6:10,3:6]
- (c) DF.iloc[5:9,2:5]                      (d) DF.iloc[6:9,3:5]

Q28. To change the 3<sup>rd</sup> column's value at 4<sup>th</sup> row as 10 in dataframe DF, you can write \_\_\_\_.

- (a) DF[3, 4] = 10                      (b) DF[3, 5] = 10
- (c) DF.at[3, 5] = 10                      (d) DF.at[3, 4] = 10

Q29. Method or function to add a new row in a data frame is:

- (a) .loc()    (b).iloc()    (c). join    (d). add()

Q30. Which command will be used to delete 3<sup>rd</sup> and 5<sup>th</sup> column of the data frame. Assuming the data frame name as DF.

- (a) DF.drop([2,4],axis=0)
- (b) (b)DF.drop([2,4],axis=1)
- (c) DF.drop([3,5],axis=1)
- (d) DF.drop([3,5])

**Answer Key:-**

|    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| a  | a  | d  | c  | a  | a  | c  | d  | a  | b  |

**Head and Tail and Rename**

Q.31 Choose the correct function to rename city columns to location using rename() function:

- a. df.rename(columns={'City':'Location'})
- b. df.rename(columns={'City'='Location'})
- c. df.rename('City'='Location')
- d. df.rename(df.columns('City','Location'))

Q.32 Which of the following statement(s) is/are correct with respect to df.columns properties to rename columns

1. All columns must be specified
2. Columns must be in the form of a list
3. Old column names not required
4. Columns can be specified with columns number
  - a. Only 1 is correct
  - b. 1, 2 and 3 are correct
  - c. 1 and 3 are correct
  - d. All of them are correct

Q.33 df.index property can be used to

- a rename rows
- b rename columns
- c rename rows and columns both
- d None of all

Q.34 To display 2 rows from the top in the dataframe, which of the following statement is correct:

- a df.head()=2                      b. df.head(2)
- c. df.head(range(2))                      d. All of the above

Q.35 Which of the following function display the last 5 rows from the DataFrame?

- a. head()                      b. tail()
- c. Tail()                      d. None of the above

Q. 36. Replace the row label 'Ankit' with 'Ankita' in dataframe 'DF'

- a. DF.Rename({'Ankit' : 'Ankita'})
- b. DF.rename({'Ankit' : 'Ankita'})
- c. DF.repalce({'Ankit':'Ankita'})
- d. None of the above

Q.37 Replace the column label from 2016 to 2020.

- a. `DF.rename({2016 : 2020}, axis = 'columns')`  
 b. `DF.rename({2016 : 2020}, axis = 'index')`  
 c. `DF.rename({2016 : 2020}, axis = 'column')`  
 d. `DF.rename({2016 : 2020}, axis = columns)`

Q.38 `DF1.head()` statement will display \_\_\_\_ rows from DataFrame 'DF1'.

- a. All                      b. 2      c. 3      d. 5

Q.39 Display first row of dataframe 'DF'

- a. `print(DF.head(1))`  
 b. `print(DF[0 : 1])`  
 c. `print(DF.iloc[0 : 1])`  
 d. All of the above

Q.40 To print first two columns of the data frame df we shall use:-

- a. `df.head(2)`                      b. `df.tail(2)`  
 c. `df.iloc[0:,0:2]`                      d. `df.head()`

### Answer Key:-

|    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| a  | b  | a  | B  | b  | b  | a  | d  | d  | c  |

### TOPIC :- INDEXING AND BOOLEAN INDEXING

Q41. Choose the correct answer if the command `df.loc['xyz':'pqr']` command is executed in given dataframe df.

|     | aaa | bbb | ccc |
|-----|-----|-----|-----|
| xyz | 1   | 2   | 3   |
| mno | 4   | 5   | 6   |
| pqr | 7   | 8   | 9   |

- a. All three rows will be selected and printed  
 b. Only first and last rows will be selected and printed  
 c. First two rows will be selected and printed  
 d. None of all

Q.42 To make the column 'aaa' as new index of dataframe df, Correct command is

- a. `df.new_index('aaa', inplace=True)`  
 b. `df.setIndex('aaa', inplace=True)`  
 c. `df.set_index('aaa', inplace=True)`  
 d. `df.reset_index('aaa', inplace=True)`

Q.43 Identify incorrect command to print column 'aaa' of above given df

- a. `print(df.aaa)`  
 b. `print(df.'aaa')`  
 c. `print(df['aaa'])`  
 d. `print(df.loc['xyz':, 'aaa'])`

Q.44 Choose correct option to print column 'aaa'

- a. `print(df['aaa'])`  
 b. `print(df.loc[ 'xyz':, 'aaa' ])`  
 c. `print(df.aaa)`  
 d. All are correct

Q.45 To print first two columns of dataframe df is

- a. `df.head(2)`  
 b. `df.tail(2)`  
 c. `df.head()`  
 d. None of all

Q 46. Choose the correct option bases on the two statements

Statement 1 :- Labeled indexing uses rows and columns title to select data in the DataFrame

Statement 2 :- In boolean indexing, we will select rows or columns based on the actual values of the data in the DataFrame

- a. Statement 1 is valid but statement 2 is invalid  
 b. Statement 1 is invalid but statement 2 is valid  
 c. Both statement are valid  
 d. Both statements are invalid

Q.47 Consider the dataframe df1 given below and answer the following questions

|        | Hindi | English | IP |
|--------|-------|---------|----|
| Aditya | 34    | 23      | 67 |
| Aman   | 34    | 85      | 56 |
| Rajesh | 60    | 80      | 91 |
| Mohit  | 45    | 21      | 32 |

Choose correct output for the command `df1[[True,False,False,True]]`

a.

|        | Hindi | English | IP |
|--------|-------|---------|----|
| Aditya | 34    | 23      | 67 |
| Aman   | 34    | 85      | 56 |

b.

|        | Hindi | English | IP |
|--------|-------|---------|----|
| Aditya | 34    | 23      | 67 |
| Rajesh | 60    | 80      | 91 |

c.

|        | Hindi | English | IP |
|--------|-------|---------|----|
| Aditya | 34    | 23      | 67 |
| Mohit  | 45    | 21      | 32 |

d.

|        | Hindi | English | IP |
|--------|-------|---------|----|
| Aman   | 34    | 85      | 56 |
| Rajesh | 60    | 80      | 91 |

Q.48 Output of the command `print(df1['IP']==91)`

a.

|        |       |
|--------|-------|
| Aditya | False |
| Aman   | False |



- Rajesh True  
Mohit False
- b. Aditya False  
Aman False  
Rajesh True  
Mohit False  
Name : IP, dtype: int64
- c. Aditya False  
Aman False  
Rajesh True  
Mohit False  
Name : IP, dtype: bool
- d. Rajesh True  
Name : IP, dtype: bool

Q.49 To select rows where 50 and above marks are stored in English subject is

|        | Hindi | English | IP |
|--------|-------|---------|----|
| Aman   | 34    | 85      | 56 |
| Rajesh | 60    | 80      | 91 |

- a. `df[df['English']>50]`  
b. `df[df['English']>=50]`  
c. `df[df['English']>=50]`  
d. `df[df['English']==50]`

Q.50 To print marks of English which is 50 and above, the correct command is

Aman 85  
Rajesh 80  
Name : English, dtype: int64

- a. `df[df['English']>=50]['English']`  
b. `df['English'][df['English']>=50]`  
c. Both a and b are correct  
d. None of all

**Answer Key:-**

|    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| a  | c  | b  | d  | d  | c  | c  | c  | b  | c  |

## **Data Visualization: -**

1. The command used to give a heading to a graph is \_\_\_\_\_ .  
a. `plt.show()`  
b. `plt.plot()`  
c. `plt.xlabel()`  
d. `plt.title()`

2. Using Python Matplotlib \_\_\_\_\_ can be used to count how many values fall into each interval.  
a. line plot  
b. bar graph  
c. histogram  
d. none of the above
3. The command to install the matplotlib is:  
a. install pip matplotlib  
b. install matplotlib  
c. pip matplotlib  
d. pip install matplotlib
4. Which graph should be used where each column represents a range of values, and the height of a column corresponds to how many values are in that range?  
a. plot  
b. line  
c. bar  
d. histogram
5. Data visualisation means  
a. Analysis of data  
b. Recovery of data  
c. Graphical representation of data  
d. None of the above
6. Module used for plotting using matplotlib is:  
a. plot  
b. pyplot  
c. draw  
d. all the above
7. Which of the following is not a component of plot?  
a. legend  
b. x axis  
c. title  
d. index
8. Function of pyplot module used to create figure is:  
a. draw()  
b. plot()  
c. show()

- d. All the above
9. Function of pyplot module used to display the figure created using plot() function is/ are:
- draw()
  - plot()
  - show()
  - All the above
10. Function of pyplot module used to save the figure is:
- save()
  - savefigure()
  - savefig()
  - all the above
11. Which of the following is a valid kind argument of plot() function
- line
  - hist
  - bar
  - color
12. Function used to set x label of the plot
- label()
  - xticks()
  - xlabel()
  - none of the above
13. Which argument is used to change the colour of plotted data?
- datacolor
  - color
  - plotcolour
  - none of the above
14. Which argument is used to change the width of line in line graph?
- markersize
  - linestyle
  - linewidth
  - width
15. Which of the following is valid code for adding title to plot?
- plt.Title('ip cs by yogendra sir')
  - plt.head('ip cs by yogendra sir')
  - plt.title('ip cs by yogendra sir')
  - all the above
16. Starting from which version ,Pandas objects Series and DataFrame come equipped with their own .plot() methods.
- version 0.17.1
  - version 0.17.0
  - version 0.17.2
  - none of the above
17. Which of the following is valid code for adding title to plot?
- plt.Title('kvsrojaipur')
  - plt.head('kvsrojaipur')
  - plt.title('kvsrojaipur')
  - all the above
18. Valid code to import pyplot module of matplotlib is
- import matplotlib as plt
  - import pyplot as plt
  - import matplotlib.pyplot as plt
  - none of the above
19. Argument used to set the line style of line chart is:
- linetype
  - linestyle
  - line
  - all the above
20. Which of the following is not a valid chart type in Python?
- lineplot
  - bargraph
  - histogram
  - statistical
21. Which Python package is used for 2D graphics?
- matplotlib.pyplot
  - matplotlib.pip
  - matplotlib.numpy
  - matplotlib.plt
22. The most popular data visualization library in Python is:
- pip
  - matinfolib
  - matplotlib
  - matpiplib
23. Matplotlib allows you to create:
- table
  - charts
  - maps

(d) infographics

24. Which of the following is not a visualization under matplotlib?

- (a) Scatter plot
- (b) Histogram
- (c) Box plot
- (d) Table plot

25. Which plot displays the distribution of data based on the five-number summary?

- (a) Scatter plot
- (b) Line plot
- (c) Box plot
- (d) Chart plot

26. Which of the following commands is used to install matplotlib for coding?

- (a) import plt.matplotlib as plot
- (b) import plot.matplotlib as pt
- (c) import matplotlib.pyplot as plot
- (d) import matplotlib.pyplot as plt

27. Which of the following methods should be employed in the code to display a plot()?

- (a) show()
- (b) display()
- (c) execute()
- (d) plot()

28. Which of the following statements is used to create a histogram of 'step' type with 20 bins?

- (a) plt.hist(x, bins = 20, histtype = "barstacked")
- (b) plt.hist(x, bins = 20)
- (c) plt.hist(x, bins = 20, histtype = "step")
- (d) plt.hist(x, bins = 20, histtype = hist())

29. which one of these is not a valid line style in matplotlib

- (a) '-'
- (b) '--'
- (c) '-.'
- (d) '<'

30. The part of chart which identifies different sets of data plotted on plot by using different colours is called:

- (a) legends
- (b) title
- (c) axes
- (d) figure

**Answers Key:**

|   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|

|    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|
| d  | c  | d  | d  | c  | b  | d  | b  | c  | c  |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| d  | c  | b  | c  | c  | b  | c  | c  | b  | d  |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |

31 For 2D plotting using a Python library, which library interface is often used ,

- a) Seaborn
- b) plotly
- c) matplotlib
- d) matplotlib.pyplot

32. Which of the followings are not a valid chart type ?

- a) Statistical
- b) Boxe
- c) Pie
- d) plot()

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

- a) pie()
- b) plot()
- c) bar()
- d) line()

34. Point out the correct combination with regards to kind keyword for graph plotting.

- (a) 'hist' for histogram
- (b) 'box' for boxplot
- (c) 'area' for area plots
- (d) all of the above

35. The plot which tells the trend between two graphed variables is the

- (a) scatter graph/chart.
- (b) pie
- (c) bar
- (d) line

36. Which of the following functions is used to create a line chart ?

- (a) line( )  
 (b) plot( )  
 (c) chart()  
 (d) plotline( )
37. Which of the following function will produce a vertical bar chart ?
- (a) plotbar( )  
 (b) plot( )  
 (c) bar( )  
 (d) barh( )
38. Which of the following function will create a vertical bar chart ?
- (a) plot( )  
 (b) bar( )  
 (c) plotbar()  
 (d) barh( )
39. Which of the following function will create a horizontal bar chart ?
- (a) plot( )  
 (b) bar( )  
 (c) plotbar( )  
 (d) barh( )
40. The data points plotted on a graph are called
- (a) points  
 (b) pointers  
 (c) marks graph is a type of chart which displays information as a series of data points  
 (d) markers
41. A graph connected by straight line segments.
- (a) line  
 (b) bar  
 (c) pie  
 (d) boxplot
42. Which argument of bar() lets you set the thickness of bar ?
- (a) thick  
 (b) thickness  
 (c) width  
 (d) barwidth
43. Which function lets you set the title of the plot?
- (a) title( )  
 (b) graphtitle().  
 (c) plottitle( )  
 (d) All of these

44. The command used to give a heading to a graph is

- (a) plt.show()  
 (b) plt.plot()  
 (c) plt.xlabel( )  
 (d) plt.title( )

45. Which function would you use to set the limits for x-axis of the plot?

- (a) limits( )  
 (b) xlimits( )  
 (c) xlim()  
 (d) lim( )

46. Which function is used to show legends?

- (a) display( )  
 (b) show( )  
 (c) legend( )  
 (d) legends( )

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

- (a) data  
 (b) label  
 (c) name  
 (d) sequence

48. Which function is used to create a histogram ?

- (a) histogram( )  
 (b) histo( )  
 (c) hist()  
 (d) histtype

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

- (a) plot( )  
 (b) bar( )  
 (c) line()  
 (d) pie( )

50. In which of the installation matplotlib is already present?

- (a) Standard official Distribution  
 (b) Installed python using Anaconda  
 (c) Installed Python using King Cobra  
 (d) Installed python using C++

**Answers Key:**

|    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
|----|----|----|----|----|----|----|----|----|----|

|    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|
| d  | a  | d  | d  | d  | b  | c  | b  | d  | d  |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| a  | c  | a  | d  | c  | c  | b  | c  | c  | b  |

### Digital Footprint, Net etiquette, Data Protection, IPR, FOSS, Plagiarism, license, copyrights

- Q1. A \_\_\_\_\_ is a body of data that you create while using the Internet:
- Digital Sign print
  - Digital hand print
  - Digital footprint
  - Digital head print
- Q2. FOSS stands for:
- Free opening System software
  - Free opened Source Software
  - Free opens System Software
  - Free and Open Source Software
- Q3. What is the Full form of IPR:
- Intelligent Product Rights
  - Intellectual Property Reserves
  - Intellectual Property Rights
  - Intelligent Property Rights
- Q4. A..... digital footprint is created when data is collected without the owner knowing.
- Passive
  - Active
  - Objective
  - Subjective
- Q5. A code of good behavior on the Internet, is Known as:
- Etiquette
  - Native
  - Netiquette
  - Protocol
- Q6. .... refers to the practices, safeguards, and binding rules put in place to protect your personal information and ensure that you remain in control of it.:
- Data Security
  - Data Protection
  - Data Stealing
  - Unknown Data
- Q7. Presenting an entire text by someone else as your own work is known as ....:
- Plain Plagiarism
  - Global Plagiarism
  - Local Plagiarism
  - Unknown Plagiarism
- Q8. Plagiarism should be avoided by the following simple measures::

- Use your own ideas and words.
  - Always provide a reference or give credit to the source from where you have received information.
  - Cite the name of the website, a URL or the name of authors, and acknowledge them if you have used their work after rearranging the order of a sentence and changing some of the work.
  - All the above
- Q9. It is a form of protection given to the authors of "original works of authorship".
- License
  - Copyright
  - Non-License
  - User rights
- Q10. Permissive licenses provide a royalty-free license to do virtually anything with the source code. Do you....?
- Agree
  - Disagree
  - Can't say
  - None of above
- Q11. Exclusive rights in the software are retained with the owner /developer / publisher are known as.....:
- Open Source Software
  - Proprietary Software
  - Free Software
  - Freeware
- Q12. Intellectual property always refers to intangible property that has been created by individuals and corporations for their benefit or usage such as copyright, trademark, patent and digital data.....:
- True
  - False
  - Sometimes
  - Never
- Q13. A copyright is automatically granted to authors or creators of content:
- True
  - False
  - Never
  - Can't say
- Q14. In FOSS source code is usually hidden from the users.
- True
  - False
  - Never
  - Sometimes
- Q15. Anushka is using her internet connection to book a train ticket. This is a classic example of leaving a trail of web activities

carried by her. What do we call this type of activity?

- a) Digital login
- b) Digital Footprint
- c) Digital Log off
- d) Digital Error

Q16. Anil likes to do his homework late at night. He uses the Internet a lot and also sends useful data through email to many of his friends. One Day he forgot to sign out from his email account. In the morning, his twin brother, Sunil started using the computer. He used Anil's email account to send inappropriate messages to his contacts. What do we call this type of activity?

- a) Stealing of Data
- b) Identity Theft
- c) Digital Theft
- d) Misuse of Email

Q17. Linux, Apache, MySQL and PHP software come under \_\_\_\_\_ category.

- a) Proprietary Software
- b) FLOSS
- c) Freeware
- d) Shareware

Q18. We should follow the rules for good Etiquettes while being online. Choose the right net etiquette (s) from the following:

- a) Avoid posting offensive comments
- b) Respect others' privacy
- c) Don't troll people in web forums
- d) All the above

Q19. Ravi is a student of class -10 and he is a very frequent user of internet applications. One day he got an unpleasant message on his WhatsApp. What do you think he should do?

- a) Forward it to others
- b) Reply back to the sender
- c) Switch off the device
- d) Tell to his parents about the incident

Q20. Sunita is confused about the free operating system available in the market. Few of her friends suggested a few operating systems. Help her in choosing free operating system for her device:

- a) Apache
- b) Windows
- c) Mozilla
- d) Ubuntu

Q 21. Aman deleted all his chats from all his social media accounts, and he thinks that all his traces are deleted completely. Is he right in thinking so?

- a) No
- b) Yes
- c) May be

d) Not Sure

Q 22. \_\_\_\_\_ is the practice of taking someone else's work or ideas and passing them off as one's own:

- a) Plagiarism
- b) Copyright
- c) Patent
- d) All of the above

Q 23. Which of the following is not a violation of IPR?

- a) Copyright Infringement
- b) Trademark Infringement
- c) Patent
- d) Plagiarism

Q 24. Which of the following is not an OSS?

- a) LibreOffice
- b) MYSQL
- c) MSOffice
- d) Linux

Q 25. The user must agree to the ..... terms and agreements when they use an OSS.

- a) System
- b) License
- c) Community
- d) Program

Q 26. Intellectual Property Rights (IPR) protect the use of information and ideas that are of....

- a) Social value
- b) Moral Value
- c) Commercial Value
- d) Ethical value

Q 27. Intellectual Property Rights (IPR) in India Covers .....

- a) Patents
- b) Copyrights
- c) Trademarks
- d) All the above

Q 28. When was Copyright Act enacted in India?

- a) 1955
- b) 1957
- c) 1959
- d) 1960

Q 29. Copyright is a.....?

- a) Negative Right
- b) Positive Right
- c) Exclusive Right
- d) Both B and C

Q 30. Which of the following is not a fair use of a copyrighted work?

- a) Use for research
- b) Use for criticism
- c) Use for review
- d) Use for commercial purpose

**Answers:**

|    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 |
| c  | d  | c  | a  | c  | b  | b  | d  | b  | a  |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| b  | a  | a  | b  | b  | b  | b  | d  | d  | d  |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| a  | a  | c  | c  | b  | c  | d  | b  | d  | d  |

### **Cybercrime and cyber laws, hacking, phishing, cyber bullying, overview of Indian IT Act.**

Q1. \_\_\_\_\_ is defined as a crime in which the computer is the medium of crime.

- a) Computer crime
- b) Cyber crime
- c) Internet crime
- d) Digital crime

Q2. Which of the following is cybercrime?

- a) Hacking
- b) Phishing
- c) Spamming
- d) All of the above

Q3. A \_\_\_\_\_ is some lines of malicious code that can copy itself and can have detrimental effect on the computers, by destroying data or corrupting the system.

- a) Cyber crime
- b) Computer virus
- c) Program
- d) Software

Q4. \_\_\_\_\_ is the act of unauthorized access to a computer, computer network or any digital system.

- a) Sign in
- b) Hacking
- c) Tracking
- d) None of the above

Q5. Hacking, when done with a positive intent, is called \_\_\_\_\_

- a) Ethical hacking
- b) Active hacking
- c) Passive hacking
- d) Ethics

Q6. Which of the following is called black hat hacker?

- a) Ethical hacker
- b) Non-Ethical hacker
- c) Both of the above
- d) None of the above

Q7. Primary focus of \_\_\_\_\_ is on security cracking and data stealing.

- a) ethical hacker
- b) non ethical hacker
- c) white hat hacker
- d) None of the above

Q8. Which of the following is not a cyber-crime?

- a) Phishing
- b) Ransomware
- c) Hacking
- d) Tracking

Q9. Hackers try to break security system \_\_\_\_\_

- a) for Identity theft
- b) for monetary gain
- c) to leak sensitive information
- d) All of the above

Q10. \_\_\_\_\_ is an activity where fake websites or emails that look original or authentic are presented to the user.

- a) Phishing
- b) Hacking
- c) Spamming
- d) Identity theft

Q11. What is the most important activity in system hacking?

- a) Information gathering
- b) Cracking passwords
- c) Escalating privileges
- d) Covering tracks

Q12. Online posting of rumours, giving threats online, posting the victim's personal information, comments aimed to publicly ridicule a victim is termed as \_\_\_\_\_

- a) Cyber bullying
- b) Cyber crime
- c) Cyber insult
- d) All of the above

Q13. In India \_\_\_\_\_ law provides guidelines to the user on the processing, storage and transmission of sensitive information.

- a) Information Technology Act, 2000
- b) Indian Technology Act, 2000
- c) Inform Technology Act, 2000
- d) Information Techware Act, 2000

Q14. Which of the following are feasible methods of e-waste management?

- a) Reduce
- b) Reuse
- c) Recycle
- d) All of the above

Q15. The process of re-selling old electronic goods at lower prices is called \_\_\_\_\_

- a) refurbishing
- b) recycle
- c) reuse

d) Reduce

Q16. e-waste is responsible for air, water and land pollution. (T/F)

a) True

b) False

Q17 e-waste is responsible for the degradation of our environment. (T/F)

a) True

b) False

Q18. Bad posture of using computer may cause \_\_\_\_\_

a) Backache

b) Neck Pain

c) Shoulder pain

d) All of the above

Q19. What we have to ensure to maintain good health of a computer system?

a) Wipe monitor's screen often using the regular microfiber soft cloth.

b) Keep it away from direct heat, sunlight and put it in a room with enough ventilation for air circulation.

c) Do not eat food or drink over the keyboard

d) All of the above

Q20. \_\_\_\_\_ is a person who deliberately sows discord on the Internet by starting quarrels or upsetting people, by posting inflammatory or off topic messages in an online community.

a) Netizen

b) Digital Citizen

c) Internet troll

d) None of the above

Q21. Which is about internet effects on eye

a) Blurred vision

b) Dry Eyes

c) Tears

d) All of the above

Q22 Which of the following is not a type of cyber-crime?

a) Data theft

b) Forgery

c) Damage to data and systems

d) Installing antivirus for protection

Q23. In which of the following, a person is constantly followed/chased by another person or group of several peoples?

a) Phishing

b) Bullying

c) Stalking

d) Identity theft

Q24. \_\_\_\_\_ is an application of information and communication technology (ICT) for delivering Government Service.

a) Governance

b) Electronic Governance

c) Governance and Ethics

d) Risk and Governance.

Q25. Use of electronic messaging systems to send unsolicited bulk messages are called

a) email bombing

b) Spamming

c) Cyber stalking

d) Phishing

Q26 What is the full form of ITA-2000?

a) Information Tech Act -2000

b) Indian Technology Act -2000

c) International Technology Act -2000

d) Information Technology Act -2000

Q27 In which year the IT Act, 2000 updated?

a) IT Act, 2007

b) Advanced IT Act, 2000

c) IT Act, 2008

d) None of the Above

Q28. Which of the following is not a cyber-crime?

a. Phishing

b. Ransomware

c. Hacking

d. Tracking

Q29. After practical, Rani left the computer laboratory but forgot to sign off from her email account. Later, her classmate Ravina started using the same computer. She is now logged in as Rani. She sends inflammatory email messages to few of his classmates using Rani's email account. Ravina's activity is an example of which of the following cyber-crime?

a) Plagiarism

b) Hacking

c) Identity theft

d) Cyber bullying

Q30. Kamal found a crumpled paper under her desk. She picked it up and opened it. It contained some text which was struck off thrice. But she could still figure out easily that the struck off text was the email ID and password of Ronak, her classmate. What is ethically correct for Kamal to do?

a) Inform Ronak so that he may change his password

b) Give the password of Ronak's email ID to all other classmates

c) Use Ronak's password to access his account

d) None of the above

**Answer Key: -**

|   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|



|    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|
| b  | d  | b  | b  | a  | b  | b  | d  | d  | a  |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| b  | a  | a  | d  | a  | a  | a  | d  | d  | c  |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| d  | d  | c  | b  | b  | d  | c  | d  | c  | a  |



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