

KENDRIYA VIDYALAYA SANGATHAN JAIPUR REGION**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**

- | | |
|--|---|
| <p>1. In the statement “import pandas as pd”, pd is:
a. Library
b. Module
c. Alias
d. Sub Module</p> <p>2. Data Frame is:
a. 2 Dimensional
b. 1 Dimensional
c. 3 Dimensional
4. Multidimensional</p> <p>3. Python pandas is not used for:
a. Data Analysis
b. Data Cleaning
c. Data Import
d. None</p> <p>4. A row of a DataFrame is made up of :
a. A list
b. An Array
c. A Series
d. A Panel</p> <p>5. When the data is in tabular format, it is preferable to import as:
a. A list
b. A DataFrame
c. A Series
d. An Array</p> | <p>6. We can transform the data in pandas with
a. Series
b. Data Frame
c. Both of the above
d. None of the above</p> <p>7. Out of the following, which is not part of the formatting parameter in a line plot?
a. xlabel
b. color
c. linestyle
d. marker</p> <p>8. Which of the following is the component of a figure?
a. axis
b. color
c. both a and b
d. none of these</p> <p>9. Method or function to delete a column in a data frame is:
a. drop()
b. remove()
c. hatao()
d. add()</p> |
|--|---|

10. _____ is the function to display the plot.
- display()
 - print()
 - tell()
 - show()
11. Irwin downloaded an image of Bhagat Singh from the Internet and used it in his project. But if the owner of the copyright of the image does not permit its free usage, then using such an image even after giving reference of the image in his project will be _____
- Trademark Infringement
 - Copyright Infringement
 - Patent Infringement
 - Plagiarism
12. Which of the following is a type of cybercrime?
- Watching movies using OTT platform
 - Not providing real information on social media platforms
 - Leaving comments while posing as someone else online
 - Using VPN to bypass location restrictions
13. 'I' in IPR stands for:
- Intelligent
 - Intellectual
 - Intel
 - Intermittent
14. Which of the following import statement is not correct?
- from pandas import *
 - import matplotlib.pyplot
 - import Pandas as pd
 - import matplotlib as pd
15. FOSS stands for:
- Free and Open Source Software
 - First and Open Source Software
 - Free and Open Source Solution
 - First and Open Source Solution
16. Pick up the incorrect statement regarding the Indian IT act.
- It was enacted in the year 2000
 - This act governs international cyber security.
 - It was later amended in 2008
 - It is also known as ITA-2000
17. Which of the following is not an attribute of series:
- size
 - shape
 - both a and b
 - columns
18. Functional expression of the idea will be protected by:
- Plagiarism
 - Copyright
 - Patent
 - All of the above
19. Function to display the last 5 rows in the DataFrame:
- head(-5)
 - tail(5)
 - tail(7)
 - both a and b
20. Some of the feasible methods of e-waste management are
- Reduce
 - Reuse
 - Recycle
 - All of the above
21. Mahika used her date of birth as a password while registering on a social media website. Is this a secure password?
- Yes
 - No
 - May be
 - Not sure

22. Excessive usage of digital devices has a _____ impact on our physical as well as _____ well-being:
- positive, psychological
 - negative, psychological
 - positive, physiological
 - negative, physiological
23. Which of these activities is not an example of cyberbullying?
- creating a deep fake of someone and posting online
 - threatening someone over messaging platform
 - sending a fake lottery ticket to someone
 - All of the above

24. Pandas data frame can be created using:
- Dictionary
 - Series
 - List
- Only i and ii are correct
 - Only ii and iii are correct
 - i, ii and iii are correct
 - None of the above
25. Pickup the incorrect statement regarding <https://data.gov.in>:
- the data needs to be purchased
 - the data is available for all
 - the data can be used to analyze in personal projects
 - the data can be used to present as infographics in commercial projects

Section – B

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

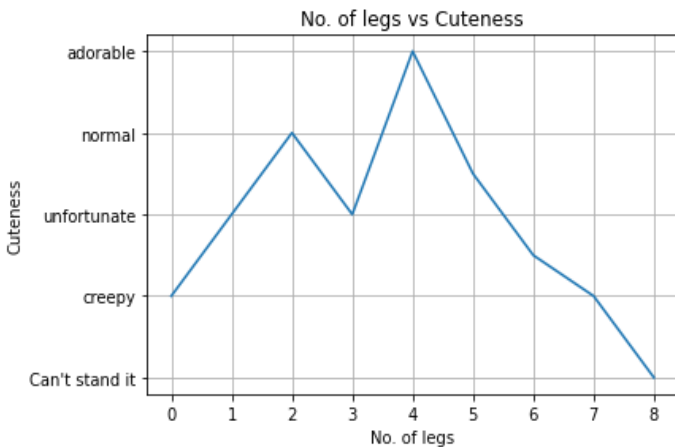
26. What will be the output of the following code segment?
- ```
series2 = pd.Series([2, 3, 4],
 index=["Feb", "Mar", "Apr"])
print(series2[2])
```
- 2
  - 3
  - 4
  - NaN
27. How to obtain the following output for the statement:
- ```
series2 = pd.Series([2, 3, 4],
                    index=["Feb", "Mar", "Apr"])
```
- Output:
Apr 4
Mar 3
dtype: int64
- print(series2[2,1])
 - print(series2[[2,1]])
 - print(series2[['Mar', 'Apr']])
 - both a and c

28. Which of the following is the correct syntax for creation of series:
- pandas.Series(data,index)
 - pandas.series(index,data)
 - pandas.Series(index,data)
 - pandas.series(data,index)
29. What will be the output of the following code segment:
- ```
import numpy as np
import pandas as pd
array1 = np.array([1,2,3,4])
s5 = pd.Series(array1,
 index = ["Jan", "Feb", "Mar"])
print(s5)
```
- |    |                                         |    |                                         |
|----|-----------------------------------------|----|-----------------------------------------|
| a. | Jan 1<br>Feb 2<br>Mar 3<br>dtype: int64 | b. | Jan 1<br>Mar 3<br>Apr 4<br>dtype: int64 |
|----|-----------------------------------------|----|-----------------------------------------|
- ValueError
  - None of the above

30. Copy and paste information from the Internet into your report and then organise it, is called:
- Hacking
  - Plagiarism
  - Credit Card Fraud
  - Identity theft

31. Fill in the blank in the code by observing the output given below:

```
#source of data: graphjam.com
import matplotlib.pyplot as plt
import numpy as np
plt._____ ('No. of legs vs Cuteness')
 #Missing method
plt.xlabel('No. of legs')
plt.ylabel('Cuteness')
plt.yticks(ticks=[0, 1, 2, 3, 4],
 labels=['Can\'t stand it', 'creepy',
 'unfortunate', 'normal', 'adorable'])
plt.xticks(np.arange(9))
x=np.arange(9)
y=[1, 2, 3 ,2, 4, 2.5, 1.5, 1, 0]
plt.grid()
plt.plot(x,y)
plt.show()
```



- legend
- title
- heading
- sheershak

32. Read the statements given below and identify the right option to draw a bar graph.

*Statement A: To make a horizontal bar graph with Matplotlib, we can use the plt.barh() function.*

*Statement B: The height parameter is compulsory to create a bar graph.*

- Both Statement A and B are correct
  - Both Statement A and B are incorrect
  - Statement A is correct, but Statement B is incorrect
  - Statement A is incorrect, but Statement B is correct
33. Histogram used for displaying the \_\_\_\_\_ of occurrences and Bar Plots helps you to compare different \_\_\_\_\_ of data.
- categories, frequencies
  - frequencies, categories
  - wavelengths, categories
  - chaos, frequencies
34. Sulaiman wants to create a presentation for an upcoming meeting but he does not have money to purchase office software. Which of the following software is a free and open source?
- PowerPoint from Microsoft Office
  - Presenter from LibreOffice
  - keynote from iWorks
  - google slides from GSuite
35. Consider the following statements with reference to the use of social media:
- Statement 1: Beware of fake information.  
Statement 2: Instantly Befriending anyone even those who are strangers  
Statement 3: Meeting an online friend after a few message exchanges.  
Statement 4: Changing the password periodically.
- Which of the above statements refer to appropriate use of social media?
- Statements 1 and 4
  - Statements 2 and 3
  - Statements 1 and 3
  - Statements 2 and 4

36. Consider the following code and write down the additional statements to display the mango from Uttar Pradesh.

```
import pandas as pd
mango=['Alphonso', 'Kesar', 'Dasher', 'Safeda', 'Langra', 'Totapuri']
state=['Maharashtra', 'Gujarat', 'Uttar Pradesh', 'Andhra Pradesh', 'Uttar Pradesh', 'Karnataka']
aam=pd.Series(state,mango,name='Khas Aam')
```

- a. print(aam['Uttar Pradesh'])  
b. print(aam.loc['Uttar Pradesh'])  
c. print(aam[aam=='Uttar Pradesh'])  
d. all of the above
37. Prithvi was registering for a quiz competition on mygov portal. For her registration she accessed a computer in the school's lab and used her social media account. After finishing the quiz she came home and to her surprise she found out that her social media platform was updated with a few demeaning posts, which she never uploaded. What sort of precautions should be taken while using a public computer so that such incidents don't occur in the first place?
- a. log out of personal accounts once done  
b. use a private browsing window  
c. clear cache and cookies after the session is over  
d. all of the above
38. With the pandemic we are mostly confined to our homes and as a result, spending more time in front of screens. But interacting in an improper posture can be bad for us. Besides, spending too much time on the Internet can be addictive and can have a negative impact on our physical and mental wellbeing. However there are a few tips that can be used to maintain a balanced lifestyle. Go through the following and figure out which one of them is not healthy choice of digital lifestyle:
- a. Taking regular breaks from screen time  
b. Using a proper posture  
c. Binge watching a new show out of the Fear of Missing Out  
d. none of the above

39. *index.name* attribute:
- a. Assigns a name to the index of the series  
b. Assigns a name to the series  
c. Assigns a new index to the series  
d. Assigns a name to the DataFrame

40. In a DataFrame, Axis= 1 represents the \_\_\_\_\_ elements.
- a. row index  
b. column index  
c. row values  
d. column values

41. Take a look at the code and output and answer the following question:

```
import pandas as pd
import numpy as np
dict={'a':97, 'Z':90, '0':48, '@':251, 'Á':301}
ascii_codes=pd.Series(dict,
 index=['a', '?', 'Z', '-', '0'])
print (ascii_codes)
```

O/P

```
a 97.0
? NaN
Z 90.0
- NaN
0 48.0
```

dtype: float64

What will `ascii_codes.count` return?

- a. 3  
b. 10  
c. 5  
d. 6

42. Consider the following statements with reference to the attributes used in Series and Data Frame:
- Statement 1: shape attribute is only available in dataframe  
Statement 2: size attribute is available in both series and dataframe  
Which of the above statements is/are true?

- a. Statements 1 and 2  
b. Statements 2  
c. Statements 1  
d. None of these statements

43. Ms. Sonam Wangchuk, the class teacher, wants to add a new column, Grade, to the DataFrame. The grades are stored in a list named lst. Help her choose the command to do so:
- df.column=lst
  - df ['Grade']=lst
  - df.loc['Grade']= lst
  - Both (b) and (c) are correct
44. Due to a viral fever, Byomkesh missed a few classes of IP, the topic of the series was midway. His classmate told him that the series is similar to list but with few key differences. Can you tell what those differences are?
- list is heterogenous whereas series is homogenous
  - both list and series supports vectorization operations
  - series supports custom index, where list only has integer index
  - Both (a) and (c) are correct
45. Digital signatures are the digital equivalent of a paper certificate. Digital signatures work on a unique digital ID issued by CA. What is the full form of CA?
- Certificate Agency
  - Chartered Accountant
  - Certificate Accountant
  - Certificate Authority
46. Take a look at the following code and output and then answer the following question:
- ```
import pandas as pd
mango=['Alphonso', 'Kesar', 'Dasher', 'Safeda', 'Langra', 'Totapuri']
state=['Maharashtra', 'Gujarat', 'Uttar Pradesh', 'Andhra Pradesh', 'Uttar Pradesh', 'Karnataka']
aam_series=pd.Series(mango, state, name='Nasl')
mango_df=pd.DataFrame(aam_series)
mango_df
```

Output:

	Nasl
Maharashtra	Alphonso
Gujarat	Kesar
Uttar Pradesh	Dasher
Andhra Pradesh	Safeda
Uttar Pradesh	Langra
Karnataka	Totapuri

What will be the data type of mango_df['Nasl']?

- series
 - array
 - list
 - data frame
47. In the given code dataframe 'df' has __ rows.
- ```
import pandas as pd
dict = [{'a':10, 'b':20},
 {'a':50, 'b':100, 'c':200},
 {'a':5, 'b':10, 'e':25}]
df = pd.DataFrame(dict)
```
- 3
  - 5
  - 4
  - 2
48. In given code dataframe 'df' has \_\_\_\_ columns.
- ```
import pandas as pd
dict_2 = [{'z':10, 'y':20}, {'z':50, 'y':100, 'x':200}, {'z':5, 'w':10, 'v':25}]
df = pd.DataFrame(dict_2)
```
- 3
 - 5
 - 4
 - 2
49. The following statement will display _____ rows of DataFrame 'df' having 5 rows:
- ```
print(df.loc[[True, True, False, False, True]])
```
- 1
  - 2
  - 3
  - 4

## Section - C

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

Mr. Pramod was planning to teach about the Olympics in one of his upcoming classes. He took help from a student of class XII to prepare the data for analysis and visualization. In the process there are a couple of problems that still need to be resolved. Kindly help them out.

Code:

```
import pandas as pd
import numpy as np
src='DataViz/master/India_at_Olympics_Medal_by_year.csv'
df=pd._____(src) # Statement 1
print(df.head())
print(df._____) # Statement 2
```

Output:

|   | Host City   | Year | Gold | Silver | Bronze | Total |
|---|-------------|------|------|--------|--------|-------|
| 0 | Tokyo       | 2020 | 1    | 2      | 4      | 7     |
| 1 | PyeongChang | 2018 | 0    | 0      | 0      | 0     |
| 2 | Rio         | 2016 | 0    | 1      | 1      | 2     |
| 3 | Sochi       | 2014 | 0    | 0      | 0      | 0     |
| 4 | London      | 2012 | 0    | 2      | 4      | 6     |

|    | Host City   | Year | Gold | Silver | Bronze | Total |
|----|-------------|------|------|--------|--------|-------|
| 30 | Los Angeles | 1932 | 1    | 0      | 0      | 1     |
| 31 | Amsterdam   | 1928 | 1    | 0      | 0      | 1     |
| 32 | Paris       | 1924 | 0    | 0      | 0      | 0     |
| 33 | Antwerp     | 1920 | 0    | 0      | 0      | 0     |
| 34 | Paris       | 1900 | 0    | 2      | 0      | 2     |

Based on the given information, answer the questions NO. 50-55

50. Which method should be placed in the blank space in statement 1 to read the data from the csv file?

- a. readCsv()
- b. read\_csv()
- c. read\_the\_csv()
- d. to\_csv()

51. Which method should be placed in the blank space in statement 2 to display the last five rows from the data frame?

- a. tail()
- b. Tail()
- c. tail
- d. tail(4)

52. Which statement will be used to save the data of 10 most recent olympics in a new object df\_last10?

- a. df\_last10= df[0,10]
- b. df\_last10= df.head(10)
- c. df\_last10= df.iloc[:,0:10]
- d. df.drop([0,10])

53. Mr. Pramod only wants to display the summer olympic data (Row index 0, 2, 4.... represents summer olympics), What would be an appropriate statement to do that?

- a. df.iloc[0: 2, :]
- b. df.iloc[ ,0: :2]
- c. df.iloc[:, 0:2]
- d. df.iloc[0: :2, :]

54. Mr. Pramod wants to change the index of the Data Frame which should start with 1 instead of 0. Identify the correct statement to change the index.

- a. df.index=["i for i in range(35)]
- b. df.index[i for i in range(1,36)]
- c. df.index=np.arange(1,36)
- d. df.index=np.arange(35)

55. Which of the following statements will display the no. of gold medals and name of host city only?

- a. df.loc[ , ['Host City', 'Gold']]
- b. df['Host City', 'Gold']
- c. df.loc[['Host City', 'Gold']]
- d. df[ , 'Host City', 'Gold']

0-0-o- Best of Luck -o-0-0



**KVS RO JAIPUR REGION**  
**Sample Question Paper 4 Term-I**  
**Subject: Informatics Practices (Code-065) Class -**  
**XII**

**Time Allowed: 90 minutes**

**Maximum Marks: 35**

**Sample Paper Set-4**

Answer Key:

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