Applied Data Analysis with Python Modular Exam

Score Obtained: 45/50 (90%)

What will be output for the following code?

import pandas as pd

s = pd.Series([1,2,3,4,5],index = ['a','b','c','d','e'])

print s['a']

1/1   ATTEMPTED

- ◉ 1

- ○ 2

- ○ 3

- ○ 4

2.

Which of the following takes a dict of dicts or a dict of array-like sequences and returns a DataFrame?

0/1   ATTEMPTED

- ○ DataFrame.from_items

- ○ DataFrame.from_records

○ DataFrame.from_dict

○ All of the above

3. Write a statement to increase five marks of all students in all subjects.

1/1   ATTEMPTED

⦿ DF[:]=DF[:] +5

○ DF[:]=DF[:] + [5]

○ Bothe of the above

○ None of the above

4. How can you filter data in a Pandas DataFrame based on a condition?

1/1   ATTEMPTED

○ Using the filter() method

○ Applying the sort() function

○ Using the subset() function

⦿ Using boolean indexing

5.
All pandas data structures are ___ mutable but not always _____mutable.

1/1   ATTEMPTED

○ size, value

○ semantic, size

⦿ value, size

○ none of the mentioned

6.
Which of the following statement will import pandas?

● import pandas as pd

1/1 ATTEMPTED

○ import panda as py

○ import pandaspy as pd

○ all of the above

7.
Which of the following object you get after reading CSV file?

● DataFrame

1/1 ATTEMPTED

○ Character Vector

○ Panel

○ All of the mentioned

8.
Which of the following library is similar to Pandas?

● NumPy

1/1 ATTEMPTED

○ RPy

○ OutPy

○ None of the mentioned

9.
Point out the correct statement.

0/1 ATTEMPTED

○ Statsmodels provides powerful statistics, econometrics, analysis and modeling functionality that is out of panda's scope

○ Vintage leverages pandas objects as the underlying data container for computation

○ Bokeh is a Python interactive visualization library for small datasets

● All of the mentioned

10. _____ is an important library used for analyzing data

1/1 ATTEMPTED

○ Math

○ Random

◉ Pandas

○ None of the above

11. Which of the following is a two-dimensional data structure in Pandas?

1/1 ATTEMPTED

○ Series

◉ DataFrame

○ Panel

○ All of these

12. Which function in pandas Return a tuple representing the dimensionality of the DataFrame?   1/1   ATTEMPTED

○ df.info()

◉ df.shape

○ df.dimension()

○ none of the above

13. Value_counts() function in pandas is being used for counting which of the following things?   1/1   ATTEMPTED

◉ count the number of times a value is being repeated

○ count the total number of values in a column

○ count the total number of rows in a dataset

○ count the number of parameter is a dataset

14. Which of the following is a data structure in pandas?   1/1   ATTEMPTED

○ Series

○ DataFrame

○ Panel

○ All of these

15.
Which of the following returns the row labels of the dataframe?

○ head()

○ tail()

○ columns

◉ index

16.
Which are pros of data visualization?

◉ It can be accessed quickly by a wider audience.

○ It can misrepresent information

○ It can be distracting

○ None Of the above

17.
Which of the following is false?

○ data visualization include the ability to absorb information quickly

○ Data visualization is another form of visual art

◉ Data visualization decrease the insights and take solwer decisions

○ None Of the above

18. The best suitable chart to display Data Trends is

1/1 ATTEMPTED

○ Bar Chart

◉ Line chart

○ Pie Chart

○ Histogram

19. What type of plot is suitable for visualizing the trend of a continuous variable over a continuous interval?

1/1 ATTEMPTED

○ Bar plot

○ Pie chart

○ Scatter plot

◉ Line plot

20. Which type of plot is commonly used to visualize the count or frequency of categorical data?

1/1 ATTEMPTED

○ Line plot

○ Scatter plot

◉ Bar plot

Heat map

21. How do you add a title to a Matplotlib plot? 1/1 ATTEMPTED

- plt.title("My Title")

- plt.set_title("My Title")

- plt.add_title("My Title")

- plt.title.add("My Title")

22. Which function is used to set the limits of the x-axis in a Matplotlib plot? 1/1 ATTEMPTED

- plt.xlim()

- plt.set_xlimits()

- plt.axis_limits()

- plt.x_axis_limits()

23. Which function would you use to save a Matplotlib figure to a file? 1/1 ATTEMPTED

- plt.save()

- plt.savefig()

- plt.write()

○ plt.output()

24. Which function is used to create a legend in a Matplotlib plot? ATTEMPTED

1/1

◉ plt.legend()

○ plt.add_legend()

○ plt.create_legend()

○ plt.set_legend()

25. How can you format labels in Matplotlib to include special characters like Greek letters? 1/1 ATTEMPTED

○ By using the str.format() method.

○ By using raw string literals.

◉ By using LaTeX syntax in the label string.

○ By using the label_format() function.

26. Which function can you use to apply a specific style to all plots in Matplotlib? 1/1 ATTEMPTED

◉ plt.style.use('ggplot')

○ plt.set_style('ggplot')

○ plt.apply_style('ggplot')

○ plt.global_style('ggplot')

27. Which function is used to set the limits for the x-axis in Matplotlib?

1/1 | ATTEMPTED

○ plt.set_xlim()

◉ plt.xlim()

○ plt.limit_x()

○ plt.axis_x()

28. How can you format tick labels to show percentages on the y-axis?

1/1 | ATTEMPTED

○ plt.yticks(format='%')

◉ plt.gca().yaxis.set_major_formatter(PercentFormatter())

○ plt.y_label_format('%')

○ plt.tick_params(ylabel_format='%')

29. What is the primary purpose of the Seaborn library in Python?

0/1 | ATTEMPTED

○ Data manipulation

○ Machine learning

○ Data visualization

◉ Statistical modeling

30. Which function is used to set the color palette for plots in Seaborn?

1/1   ATTEMPTED

○ sns.set_palette()

○ sns.color_palette()

○ sns.set_colors()

○ sns.palette()

31. Which function is used to create a box plot in Seaborn?   1/1   ATTEMPTED

◉ sns.boxplot()

○ sns.plot_box()

○ sns.box_plot()

○ sns.create_boxplot()

32. Which function is used to create a KDE plot in Seaborn?   1/1   ATTEMPTED

◉ sns.kdeplot()

○ sns.kde()

○ sns.create_kde()

○ sns.density_plot()

33. How can you add a shaded area under the KDE curve in Seaborn?

0/1   ATTEMPTED

○ sns.kdeplot(x, shade=True)

○ sns.kdeplot(x, fill=True)

○ sns.kdeplot(x, area=True)

○ sns.kdeplot(x, alpha=0.5)

34. What is the primary purpose of the sns.pairplot() function in Seaborn?

1/1   ATTEMPTED

○ To visualize the distribution of a single variable

◉ To create a grid of scatter plots for multiple variable pairs

○ To perform linear regression analysis

○ To plot time series data

35. How can you limit the pairplot to include only a subset of columns from a DataFrame?

1/1   ATTEMPTED

○ sns.pairplot(df[['col1', 'col2', 'col3']])

○ sns.pairplot(df, columns=['col1', 'col2', 'col3'])

○ sns.pairplot(data=df[['col1', 'col2', 'col3']])

◉ All of the above

36.
Data Analysis is a process of?

1/1   ATTEMPTED

○ inspecting data

○ cleaning data

○ transforming data

● All of the above

37.
Data science is the process of diverse set of data through ?

○ organizing data

1/1   ATTEMPTED

○ processing data

○ analyzing data

● All of the above

38.
Who is a data scientist?

○ Statistician

1/1   ATTEMPTED

○ Mathematician

○ Software programmer

● All of the above

39.
Point out the correct statement.

● Raw data is original source of data

1/1   ATTEMPTED

○ Preprocessed data is original source of data

○ Raw data is the data obtained after processing steps

○ None of the mentioned

40. Which of the following is a powerful python library for data manipulation and analysis, particularly for working with structured data?

○ Springboot

● Pandas

○ Matplotlib

○ Seaborn

41.
Which of the following is performed by Data Scientist?

○ Define the question

○ Create reproducible code

○ Challenge results

● All of the mentioned

42.
Which of the following is the most important language for Data Science?

○ Java

○ Ruby

○ R

○ None of the mentioned

43.
Point out the wrong statement.

1/1   ATTEMPTED

○ Merging concerns combining datasets on the same observations to produce a result with more variables

⦿ Data visualization is the organization of information according to preset specifications

○ Subsetting can be used to select and exclude variables and observations

○ All of the mentioned

44. Which of the following is organized and formatted data that fits into a predefined model?

1/1   ATTEMPTED

⦿ Structured

○ Unstructured

○ Semi Structured

○ All of the above

45. Which of the following is data that is partially structured, often with tags or elements that separate the data?

0/1   ATTEMPTED

○ Structured

○ Unstructured

○

Semi Structured

○ All of the above

46. What is the primary goal of data analytics?   1/1   ATTEMPTED

○ Storing data

◉ Extracting insights and patterns

○ Creating data backups

○ Encrypting data

47.
"Continuous" VS "Discrete" can be written as?

◉ Measured Vs Counted   1/1   ATTEMPTED

○ Counted Vs Measured

○ Measured Vs Nominal

○ None of these

48.
A teacher notes down the weight of each student in the class. What level of measurement is being used in this case

◉ RATIO   1/1   ATTEMPTED

○ NOMINAL

○ QUALITATIVE

○ NONE OF THESE

49.

_____ is the Data that is sourced by someone other than user

1/1 ATTEMPTED

○ Primary Data

○ Quantity Data

◉ Secondary Data

○ Tertiary Data

50. In a line graph, what does an upward-sloping line typically indicate?

1/1 ATTEMPTED

◉ Positive correlation

○ Negative correlation

○ No correlation

○ Categorical data