FPT UNIVERSITY DANANG CAMPUS	**PROGRESS TEST 1** **TIME:** 20 MINUTES **DATE**: …… /…… /2024 **CLASS**:	**Exam code** **1A**

Name of student : ..... Student Code: .....

ANSWER SHEET:

1 C	2 B	3 A	4 B	5 A	6 B	7 B	8 A	9 A	10 D
11 A	12 A	13 A	14 C	15 A	16 C	17 B	18 C	19 C	20 B
21 A	22 C	23 A	24 D	25 C	26 A	27 A	28 B	29 B	30 C

---------- QUESTIONS ----------

1. Which library in Python is most commonly used for data manipulation and analysis?

A. NumPy
B. Matplotlib
C. Pandas
D. SciPy

2. How do you read a CSV file into a DataFrame in Pandas?

A. pd.read_excel()
B. pd.read_csv()
C. pd.read_table()
D. pd.read_json()

3. What function loads data from an Excel file into a DataFrame?

A. pd.read_excel()
B. pd.read_csv()
C. pd.read_table()
D. pd.read_sql()

4. How would you read data from an SQL database into a Pandas DataFrame?

A. pd.read_html()
B. pd.read_sql()
C. pd.read_pickle()
D. pd.read_feather()

5. How can you read data from a JSON file into a DataFrame?

A. pd.read_json()
B. pd.read_html()
C. pd.read_pickle()
D. pd.read_table()

6. Which method is used to write a DataFrame to a CSV file?

A. to_excel()
B. to_csv()
C. to_json()

D. to_sql()

7. What is the correct way to load a DataFrame from a URL containing a CSV file?
   A. pd.read_csv(url)
   B. pd.read_csv(file)
   C. pd.read_table(url)
   D. pd.read_url(file)
8. Which method allows you to read HTML tables into a list of DataFrames?
   A. pd.read_html()
   B. pd.read_sql()
   C. pd.read_table()
   D. pd.read_pickle()
9. How do you read a pickled DataFrame from a file?
   A. pd.read_pickle()
   B. pd.read_table()
   C. pd.read_sql()
   D. pd.read_feather()
10. Which library is required to read an Excel file into a Pandas DataFrame?
   A. openpyxl
   B. xlsxwriter
   C. xlrd
   D. Any of the above
11. Which method provides a quick overview of the DataFrame, including the index dtype and columns, non-null values and memory usage?
   A. df.info()
   B. df.describe()
   C. df.head()
   D. df.tail()
12. What does the df.describe() method return by default?
   A. Descriptive statistics of all columns
   B. The first 5 rows of the DataFrame
   C. The last 5 rows of the DataFrame
   D. The data types of each column
13. How do you view the first few rows of a DataFrame?
   A. df.head()
   B. df.tail()
   C. df.info()
   D. df.sample()
14. Which method would you use to view a summary of a DataFrame's columns, including the data types?
   A. df.describe()
   B. df.head()
   C. df.info()
   D. df.shape()
15. What does the df.shape attribute return?
   A. The number of rows and columns in the DataFrame

B. The data types of each column
C. A summary of descriptive statistics
D. The first few rows of the DataFrame

16. Which method returns the number of non-NA/null observations in the DataFrame?
A. df.notnull()
B. df.notna()
C. df.count()
D. df.isna()

17. How do you generate a random sample of rows from a DataFrame?
A. df.random()
B. df.sample()
C. df.shuffle()
D. df.random_sample()

18. What method is used to get a quick statistical summary of the numeric columns in a DataFrame?
A. df.info()
B. df.summary()
C. df.describe()
D. df.details()

19. Which function allows you to see a concise summary of a DataFrame, including the column names, non-null values, and data types?
A. df.columns()
B. df.summary()
C. df.info()
D. df.describe()

20. How do you display the number of unique values in a DataFrame's column?
A. df.unique()
B. df.nunique()
C. df.value_counts()
D. df.count_unique()

21. Which method is used to identify the correlation between columns in a DataFrame?
A. df.corr()
B. df.cov()
C. df.describe()
D. df.info()

22. How do you sort a DataFrame by a specific column?
A. df.sort()
B. df.order()
C. df.sort_values()
D. df.arrange()

23. What method would you use to find the unique values in a column?
A. df.unique()
B. df.value_counts()
C. df.nunique()

D. df.distinct()

24. Which method allows you to filter rows of a DataFrame based on a condition?
    A. df.filter()
    B. df.loc[]
    C. df.iloc[]
    D. df.query()
25. How do you access a specific column in a DataFrame?
    A. df.get_column()
    B. df.column[]
    C. df[]
    D. df.get()
26. Which method would you use to apply a function to each element of a DataFrame column?
    A. df.apply()
    B. df.map()
    C. df.transform()
    D. df.applymap()
27. How do you drop missing values from a DataFrame?
    A. df.dropna()
    B. df.removena()
    C. df.omitna()
    D. df.nullremove()
28. Which function would you use to fill missing values in a DataFrame?
    A. df.fill()
    B. df.fillna()
    C. df.replace()
    D. df.nullfill()
29. How do you rename columns in a DataFrame?
    A. df.rename_columns()
    B. df.rename()
    C. df.change_columns()
    D. df.columns_rename()
30. Which method allows you to merge two DataFrames on a key column?
    A. df.join()
    B. df.concat()
    C. df.merge()
    D. df.combine()

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