Pandas: 25 Practice Questions

1. Create a Pandas DataFrame from a dictionary of lists.

2. Load a CSV file named 'data.csv' and display the first 5 rows.

3. Display basic statistics (mean, min, max, std) of a DataFrame.

4. Show the shape, column names, and data types of a DataFrame.

5. Rename the columns of a DataFrame.

6. Filter rows where the column 'age' is greater than 25.

7. Select only the 'name' and 'salary' columns from a DataFrame.

8. Find rows with missing values.

9. Drop all rows with any NaN values.

10. Fill all missing values in column 'salary' with the column mean.

11. Sort the DataFrame by 'salary' in descending order.

12. Group the data by 'department' and calculate the average salary per department.

13. Count the number of employees in each department.

14. Find the maximum salary for each job title.

15. Add a new column 'taxed_salary' as 90% of the 'salary' column.

16. Merge two DataFrames 'df1' and 'df2' on the column 'employee_id'.

17. Concatenate two DataFrames row-wise and reset the index.

18. Apply a custom function to calculate bonus as 10% of salary.

19. Convert a 'date' column to datetime and extract the year.

20. Create a pivot table showing average salary by 'department' and 'gender'.

21. Convert all column names in a DataFrame to lowercase.

22. Replace all values in the 'salary' column greater than 70,000 with 'High', and the rest with 'Normal'.

23. Drop duplicate rows based on the 'employee_id' column.

24. Create a new column 'experience_level' using conditions: If experience > 5 years -> 'Senior',

else -> 'Junior'.

25. Sort a DataFrame by 'department', then by 'salary' in descending order.