**Pandas**

**Q1. What is Pandas used for?**  
Data manipulation and analysis.

**Q2. Difference between Series and DataFrame?**  
Series is 1D, DataFrame is 2D tabular structure.

**Q3. How do you create a DataFrame?**  
From dict, list of lists, NumPy arrays, CSV, Excel, SQL.

**Q4. How do you read CSV in Pandas?**  
 pd.read\_csv("file.csv").

**Q5. How do you inspect a DataFrame?**  
 df.head(), df.info(), df.describe().

**Q6. How do you filter rows?**  
 df[df['col'] > 10].

**Q7. Difference between loc and iloc?**  
 loc: label-based, iloc: index-based.

**Q8. How do you handle missing values?**  
df.fillna() or df.dropna().

**Q9. How to add a new column in DataFrame?**  
 df['new'] = values.

**Q10. How to group data in Pandas?**  
 df.groupby('col').mean().

**Q11. How do you merge/join DataFrames?**  
 Using pd.merge() or pd.concat().

**Q12. How to sort a DataFrame?**  
 df.sort\_values(by='col').

**Q13. What is apply() used for?**  
 Apply custom functions row-wise or column-wise.

**Q14. What are categorical data types in Pandas?**  
 Optimized storage for repetitive string values using astype('category').

**Q15. What are Series and DataFrame?**  
Series: 1D labeled array, DataFrame: 2D labeled table.

**Q16. How to handle missing values in Pandas?**  
Using fillna() or dropna().

**Q17. How do you select a column and a row in Pandas?**  
Column: df['col']  
Row by index: df.loc[2] or df.iloc[2].

**Q18. Difference between loc and iloc?**  
loc → label-based, iloc → integer position-based indexing.