Complete Syllabus for Data Analytics interview:

SQL:

1. Basic

- SELECT statements with WHERE, ORDER BY, GROUP BY, HAVING

- Basic JOINS (INNER, LEFT, RIGHT, FULL)

- Creating and using simple databases and tables

2. Intermediate

- Aggregate functions (COUNT, SUM, AVG, MAX, MIN)

- Subqueries and nested queries

- Common Table Expressions (WITH clause)

- CASE statements for conditional logic in queries

3. Advanced

- Advanced JOIN techniques (self-join, non-equi join)

- Window functions (OVER, PARTITION BY, ROW_NUMBER, RANK, DENSE_RANK, lead, lag)

- optimization with indexing

- Data manipulation (INSERT, UPDATE, DELETE)

Python:

1. Basic

- Syntax, variables, data types (integers, floats, strings, booleans)

- Control structures (if-else, for and while loops)
- Basic data structures (lists, dictionaries, sets, tuples)
- Functions, lambda functions, error handling (try-except)
- Modules and packages

2. Pandas & Numpy

- Creating and manipulating DataFrames and Series
- Indexing, selecting, and filtering data
- Handling missing data (fillna, dropna)
- Data aggregation with groupby, summarizing data
- Merging, joining, and concatenating datasets

3. Basic Visualization

- Basic plotting with Matplotlib (line plots, bar plots, histograms)
- Visualization with Seaborn (scatter plots, box plots, pair plots)

PH4N745M

- Customizing plots (sizes, labels, legends, color palettes)
- Introduction to interactive visualizations (e.g., Plotly)

Excel:

1. Basic

- Cell operations, basic formulas (SUMIFS, COUNTIFS, AVERAGEIFS, IF, AND, OR, NOT & Nested Functions etc.)
- Introduction to charts and basic data visualization
- Data sorting and filtering
- Conditional formatting

2. Intermediate

- Advanced formulas (V/XLOOKUP, INDEX-MATCH, nested IF)
- PivotTables and PivotCharts for summarizing data
- Data validation tools
- What-if analysis tools (Data Tables, Goal Seek)

3. Advanced

- Array formulas and advanced functions
- Data Model & Power Pivot
- Advanced Filter
- Slicers and Timelines in Pivot Tables
- Dynamic charts and interactive dashboards

Power BI:

1. Data Modeling

- Importing data from various sources
- Creating and managing relationships between different datasets
- Data modeling basics (star schema, snowflake schema)

2. Data Transformation

- Using Power Query for data cleaning and transformation
- Advanced data shaping techniques
- Calculated columns and measures using DAX

3. Data Visualization and Reporting

- Creating interactive reports and dashboards

- Visualizations (bar, line, pie charts, maps)

- Publishing and sharing reports, scheduling data refreshes

Statistics Fundamentals: Mean, Median, Mode, Standard Deviation, Variance, Probability Distributions, Hypothesis Testing, P-values, Confidence Intervals, Correlation, Simple Linear Regression, Normal Distribution, Binomial Distribution, Poisson Distribution.

..