1. Prepare the Data (15-20%)

1. Which data sources can Power BI Desktop connect to?
   a) Excel, SQL Server, and Web Data
   b) Only SQL Server
   c) Only Excel and CSV
   d) Only cloud-based databases

2. What is the purpose of Power Query in Power BI?
   a) Create reports
   b) Load data into SQL Server
   c) Clean, transform, and prepare data
   d) Run DAX calculations

3. What happens when you load data using **DirectQuery** mode?
   a) Data is imported into Power BI
   b) Data remains in the source and queries are executed on demand
   c) Data is compressed and stored in Power BI
   d) Data is automatically refreshed every minute

4. Which Power BI feature allows you to combine multiple queries into one?
   a) Append Queries
   b) Merge Queries
   c) Both a & b
   d) None of the above

5. How can you remove duplicate records in Power Query?
   a) Using the DAX function REMOVE_DUPLICATES()
   b) Using the "Remove Duplicates" option in Power Query
   c) Using "Filter" in Power BI Report View
   d) By using the DISTINCT() function in a measure

6. Which of the following is NOT a supported data source for Power BI?
   a) JSON
   b) XML
   c) Notepad (.txt)
   d) None of the above

7. What is the difference between **Append Queries** and **Merge Queries** in Power Query?
   a) Append adds rows, Merge combines columns
   b) Merge adds rows, Append combines columns
   c) Both perform the same operation
   d) None of the above

8. What does the "Unpivot Columns" operation do in Power Query?
   a) Converts columns into rows
   b) Converts rows into columns
   c) Groups data by a specific column
   d) Splits a column into multiple columns

9. Which of the following is an advantage of using **DirectQuery** over **Import Mode**?
   a) Supports real-time data updates
   b) Improves performance for large datasets
   c) Enables offline usage of data
   d) Allows data storage within Power BI

10. What is the primary function of the "Data Profiling" feature in Power Query?
    a) Create dashboards
    b) Identify data quality issues
    c) Apply transformations automatically
    d) Generate calculated measures

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2. Model the Data (25-30%)

11. What is a **Star Schema** in data modeling?
    a) A schema with multiple fact tables
    b) A schema with one fact table and multiple dimension tables
    c) A schema with only one table
    d) A schema with no relationships

12. What does a **One-to-Many** relationship mean in Power BI?
    a) One row in Table A can relate to many rows in Table B
    b) Many rows in Table A relate to one row in Table B
    c) Many rows in Table A relate to many rows in Table B
    d) One row in Table A can relate to only one row in Table B

13. How can you create a relationship between two tables in Power BI?
    a) Using Power Query
    b) Using DAX
    c) Using the Model View
    d) All of the above

14. What is the function of **Cardinality** in relationships?
    a) Defines how tables are joined
    b) Determines column data types
    c) Controls report permissions
    d) Filters data dynamically

15. What is the use of a **Fact Table** in Power BI modeling?
    a) Stores dimension data
    b) Stores numerical and transactional data
    c) Stores user permissions
    d) Stores calculated measures only

16. How does **row-level security (RLS)** restrict data access?
    a) Hides columns from users
    b) Restricts data access based on user roles
    c) Filters visuals dynamically
    d) Disables Power BI Service access

17. What is the main purpose of **Composite Models** in Power BI?
    a) Allow both Import and DirectQuery modes in the same model
    b) Create more than one visualization type
    c) Improve Power BI report speed
    d) None of the above

18. What is the difference between **Single-directional** and **Bi-directional relationships**?
    a) Single-directional filters in one direction, Bi-directional filters in both
    b) Both filter data in the same way
    c) Bi-directional relationships are not supported
    d) Single-directional applies filters dynamically

19. When would you use **Calculated Tables** instead of a regular table?
    a) When data needs to be transformed before import
    b) When relationships between tables are complex
    c) When tables need additional computed columns
    d) All of the above

20. What happens when you create an **inactive relationship** in Power BI?
    a) The relationship is ignored
    b) The relationship works only in certain visuals
    c) It can be activated using the USERELATIONSHIP function in DAX
    d) It refreshes automatically

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3. Visualize and Analyze Data (25-30%)

21. What is the main advantage of using **Bookmarks** in Power BI?
    a) Save filters and slicer states
    b) Create a new dataset
    c) Apply conditional formatting
    d) Improve performance

22. How can you drill down in a Power BI visualization?
    a) Clicking the drill-down button on the visual
    b) Creating a new DAX measure
    c) Editing the Power Query transformation
    d) Modifying the dataset

23. Which visual is best for displaying trends over time?
    a) Pie Chart
    b) Line Chart
    c) Tree Map
    d) Gauge Chart

24. What is the purpose of a **Measure** in Power BI?
    a) Store raw data
    b) Perform calculations dynamically
    c) Filter reports
    d) Convert data types

25. What does the **SUMX** function do in Power BI DAX?
    a) Sums values in a column
    b) Performs row-wise calculations before summing
    c) Filters data before aggregation
    d) Converts data types

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4. Deploy and Maintain Assets (10-15%)

26. What is the primary use of **Power BI Service**?
    a) Data visualization
    b) Cloud-based report sharing
    c) Data transformation
    d) Data modeling

27. How do you schedule a data refresh in Power BI Service?
    a) Using Power Query
    b) Through Dataset settings
    c) By modifying DAX measures
    d) It refreshes automatically

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5. Optimize Performance (10-15%)

28. What is **Aggregation** in Power BI, and how does it improve performance?
    a) Reduces data size and speeds up queries

b) Adds more data points
c) Converts numerical data into categorical
d) Applies security filters

29. How does **Query Folding** impact performance?
    a) Pushes transformations to the data source
    b) Slows down report refresh
    c) Converts queries into DAX
    d) Only works in Import Mode

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6. Manage Workspaces and Data Security (5-10%)

30. What is a Power BI **Workspace**, and how is it different from **My Workspace**?
    a) Workspaces allow collaboration, My Workspace is personal
    b) Workspaces store datasets, My Workspace stores reports only
    c) Both are the same
    d) Workspaces cannot be shared

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3. Visualize and Analyze Data (Continued)

31. How can you apply conditional formatting in Power BI visuals?
    a) By using calculated columns
    b) Through the **Format Pane**
    c) Only in Power Query
    d) By writing SQL queries

32. What is the purpose of **What-If Parameters**?
    a) To test different scenarios dynamically
    b) To filter data automatically
    c) To replace the need for slicers
    d) To create relationships between tables

33. What is the key difference between a **Clustered Column Chart** and a **Stacked Column Chart**?
    a) Clustered charts group bars side by side, while stacked charts stack values in one bar
    b) Stacked charts can only show one measure
    c) Clustered charts cannot be used in Power BI
    d) Both charts display the same data in the same way

34. Which visual would be best for showing relationships between two numeric values?
    a) Pie Chart

b) Scatter Plot
c) Bar Chart
d) Funnel Chart

35. What is the use of **Drillthrough** in Power BI reports?
    a) To create interactive dashboards
    b) To filter a detailed report based on selection in another report
    c) To schedule report refreshes
    d) To remove unnecessary data

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4. Deploy and Maintain Assets (Continued)

36. What is the purpose of **Gateways** in Power BI?
    a) To create reports
    b) To connect Power BI Service to on-premises data sources
    c) To merge datasets
    d) To secure Power BI workspaces

37. What are **Power BI Dataflows**, and how do they differ from Datasets?
    a) Dataflows transform data before storage, while datasets store processed data
    b) Datasets create reports, while dataflows visualize data
    c) Dataflows are only available in Power BI Desktop
    d) There is no difference

38. How can you share a Power BI report securely with external users?
    a) Use Power BI Publish to Web
    b) Create a SharePoint link
    c) Enable **External Sharing** in Power BI Service
    d) Export as an Excel file

39. What are the main differences between **Power BI Pro** and **Power BI Premium**?
    a) Power BI Premium allows larger datasets and more capacity
    b) Power BI Pro is free
    c) Power BI Premium is only for personal use
    d) Power BI Pro does not support cloud-based reports

40. What is the primary function of the **Usage Metrics Report** in Power BI Service?
    a) To analyze how users interact with reports
    b) To clean and transform data
    c) To build machine learning models
    d) To generate new visualizations

41. How can you enable **Incremental Refresh** in Power BI?
    a) By enabling the "Auto Refresh" option in reports
    b) By defining range parameters in Power Query

c) By using a calculated column
d) By creating a new workspace

42. How does **Row-Level Security (RLS)** work when publishing reports?
    a) Filters data based on user login credentials
    b) Hides the report from non-admin users
    c) Allows full access to all data
    d) Works only in Power BI Desktop

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5. Optimize Performance (Continued)

43. What is the best way to improve Power BI report performance with large datasets?
    a) Use **Aggregated Tables**
    b) Load all data into memory
    c) Disable relationships between tables
    d) Convert reports into Excel

44. Which indexing strategy can improve DirectQuery performance?
    a) Creating indexes in the data source
    b) Using only Import Mode
    c) Removing all foreign key constraints
    d) Using the SUM() function

45. How does **Query Folding** impact performance?
    a) Pushes transformations to the data source
    b) Slows down report refresh
    c) Converts queries into DAX
    d) Only works in Import Mode

46. What are the benefits of **Aggregated Tables** in Power BI?
    a) Improve report performance by reducing the amount of data processed
    b) Automatically refresh reports
    c) Increase the dataset size
    d) Replace DirectQuery

47. What role does **VertiPaq Engine** play in Power BI performance?
    a) Compresses data and optimizes calculations in Import Mode
    b) Runs DirectQuery queries faster
    c) Stores data only in Power BI Service
    d) Performs SQL operations in Power BI

48. When should you use **Hybrid Tables** in Power BI?
    a) When using both Import and DirectQuery for different partitions
    b) When working with real-time streaming data
    c) When filtering a dataset

d) When performing drillthrough operations

49. How does **Parallel Processing** improve Power BI report performance?
    a) Allows multiple queries to run simultaneously
    b) Prevents data duplication
    c) Reduces report refresh frequency
    d) Eliminates memory usage

50. What is the impact of **unused columns** on report performance?
    a) Increases dataset size and slows performance
    b) Improves memory efficiency
    c) Reduces query speed
    d) Has no effect

51. How does the **Performance Analyzer** tool help in optimizing Power BI reports?
    a) Analyzes report execution times and suggests optimizations
    b) Deletes unnecessary data
    c) Compresses reports for faster performance
    d) Converts reports to PowerPoint

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6. Manage Workspaces and Data Security (5-10%)

52. What is a Power BI **Workspace**, and how is it different from **My Workspace**?
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    c) Both are the same
    d) Workspaces cannot be shared

53. What permissions does a **Power BI Contributor** role have?
    a) View reports only
    b) Edit content, but cannot publish apps
    c) Manage user access
    d) Delete the workspace

54. How can you restrict access to reports within a workspace?
    a) Using **Row-Level Security (RLS)**
    b) By setting workspace permissions
    c) By using Sensitivity Labels
    d) All of the above

55. How does Power BI integrate with **Microsoft Purview** for data governance?
    a) Enables data discovery and lineage tracking
    b) Provides enhanced visualization features
    c) Automates data transformations
    d) Allows sharing of reports