1. List three data sources Power BI can connect to.

   Power BI can connect to many different data sources. There are three important ones:
   1) SQL Server and Azure SQL databases
   2) Excel files
   3) SharePoint Online lists and folders

2. What is the first step to import data into Power BI Desktop?

   The first step to import data into Power BI Desktop is to click on the "Get Data" button in the Home ribbon. This opens the data source selection window where you can choose the type of data source you want to connect to.

3. How do you refresh imported data in Power BI?

   In Power BI Desktop on the Home ribbon there is 'Refresh' button. This enables user to update data set with the latest data from the connected source.
   In Power BI Online Service there is 'Refresh' button on the menu bar and also it is possible to set up scheduled refresh in dataset settings.

4. What file formats can Power BI import directly? (Name two.)

   Power BI can import several file formats directly. These two are common ones:
   1) Excel (.xlsx, .xlsm, .xls)
   2) CSV (Comma Separated Values)

5. What does the "Navigator" window show after selecting a data source?

   This window shows hierarchical structure of the data source, displaying available datasets, tables, folders, sheets depending source type. It is possible to preview selected data objects and this allows to see sample data before loading. There are 'Load' and 'Transform Data' buttons which allows user to load data to Power BI. In transforming Power Query Editor enables making changes to data before loading to Power BI.

6. Import Sales_Data.csv and load only the "Product" and "Price" columns.

Get Data → Text/CSV → Sales_Data.csv → Open → Transform Data → select 'Product' and 'Price' columns → Remove other columns → Close & Apply

7. How would you change OrderDate to a date format during import?

   While transforming data, in Power Query:
   - Right click on OrderDate column header
   - 'Change type'
   - 'Date'

8. What is the difference between "Load" and "Transform Data" in the import dialog?

   "Load" imports data directly into Power BI without any modifications. The data goes straight into data model exactly as it appears in the source, and user can immediately start creating visualizations and reports. This option is useful when data is already ready to use.

   "Transform Data" opens the Power Query Editor before loading the data. This lets user clean, reshape, and transform data before it enters the model. This option is essential when data needs to be changed before moving to Power BI for analysis.

9. Why might you see an error when connecting to a SQL database? (Name one reason.)

   There might be potential issues with network connectivity, incorrect server name, firewall restrictions. The most common problem might be insufficient permissions. If user account doesn't have enough access rights to the database, Power BI will return an error while connecting.

10. How do you replace a data source after importing it?

   In Power BI:
   - Home
   - Transform Data

   In Power Query Editor:
   - Home
   - Data Source settings
   - Selecting current source

- Change source
- Entering new connection details
- Ok
- Close
- Close & Apply

11. Write the M-code to import only rows where Quantity > 1.

```
let
    Source = Sales_Data,
    FilteredRows = Table.SelectRows(Source, each [Quantity] > 1)
in
    FilteredRows
```

12. How would you change the data source if Sales_Data.csv changed?

Steps to change data source:
- Open Power Query Editor
- Select Sales_Data.csv query
- Locate first step
- Update file path to the new location of the updated file
- Ok
- Refresh
- Close & Apply

13. Troubleshoot: Your CSV import fails due to a "mixed data type" error—how do you fix it?

A "mixed data type" error during CSV import in Power BI Desktop usually occurs when a column contains inconsistent data types (e.g., numbers and text in the same column), causing Power Query to struggle with automatic type detection.
To fix this:
- In Power Query Editor:
  o Values with N/A or error causing ones are replaced with 0 or left blank
  o Correct data type is set for the column
  o Save and Refresh

14. Connect to a live SQL database with parameters (e.g., filter by year).

In Power BI Desktop:
- Home → Get data → SQL server
- SQL server details
- Advanced options: paste SQL query
- Transform Data

In Power Query Editor:

- Home → Manage Parameters → New Parameters
- Enter new parameter details
- Modify query in Power Query
- Close & Apply

15. How would you automate data imports using Power BI and Power Automate?

In Power BI desktop:
- File → Publish → Power BI Service
- Choosing required workspace

In Power Automate:

- Create → automated cloud flow
- Choosing a trigger
- New action
- Configure action