1. What is Power BI, and what are its three main components?
Power BI is a Microsoft business analytics tool used to visualize data and share insights across an organization.
Three main components:
Power BI Desktop – Authoring and publishing reports.
Power BI Service (PowerBI.com) – Cloud-based sharing and collaboration.
Power BI Mobile – Mobile app for accessing reports on the go.

2. Name two business use cases for Power BI dashboards.
Sales Performance Dashboard: Monitor KPIs like revenue, conversion rates, and top-performing products.

Financial Analysis Dashboard: Track expenses, profit margins, and budget vs. actuals.

3. How do you download and install Power BI Desktop?
Go to the official Power BI download page.

Click "Download free" or get it from Microsoft Store.

Run the installer and follow the installation prompts.

4. What is the difference between Power BI Desktop and Power BI Service?

Feature	Power BI Desktop	Power BI Service
Usage	Report creation	Report sharing and collaboration
Hosting	Local PC	Cloud (web-based)
Requires internet	No	Yes

5. What file extension does a Power BI project use?
.pbix – Power BI Desktop file.

6. Explain the role of Power Query in Power BI.
Power Query is the ETL (Extract, Transform, Load) tool in Power BI. It helps:

Connect to various data sources

Clean, filter, and shape data before analysis

Automate data transformation steps

7. Why would a business prefer Power BI over Excel for reporting?
Interactive visualizations

Real-time dashboards

Scalability with large datasets

Automatic data refresh

Role-based security

8. Describe one limitation of the free version of Power BI.
You cannot share reports and dashboards with other users unless you or the recipient have a Power BI Pro license.

9. What is a "published report" in Power BI Service?
A published report is a Power BI Desktop .pbix file uploaded to the Power BI cloud service, allowing others to view, interact, and collaborate on the report.

10. How does Power BI Mobile enhance accessibility?
View reports and dashboards on smartphones and tablets

Get push notifications for report changes

Use natural language queries (Q&A)

Enables decision-making on the go

11. Compare Power BI with Tableau—pros and cons.

Tool	Pros	Cons
Power BI	Affordable, integrates with Microsoft tools	Less flexible in visualization than Tableau
Tableau	Superior visuals, powerful analytics	More expensive, steeper learning curve

12. Explain how Power BI integrates with Azure services.
Connects to Azure SQL Database, Azure Synapse Analytics, Azure Blob Storage

Supports Azure Active Directory (AAD) for identity/security

Works with Azure Machine Learning for predictive analytics

13. What are "gateways" in Power BI, and when are they needed?
Gateways are connectors that allow Power BI Service to access on-premises data sources securely.

Needed when publishing a report that pulls data from local servers (SQL Server, Excel, etc.)

14. How would you convince a company to adopt Power BI? (ROI argument)
Power BI offers:

Low cost with high impact

Time savings through automation of reports

Data-driven decisions leading to better performance

Proven increase in productivity and operational efficiency

15. What security features does Power BI offer for sensitive data?
Row-level security (RLS) – Controls data access per user

Azure Active Directory (AAD) – Identity and access management

End-to-end encryption

Data Loss Prevention (DLP) policies

Auditing and activity monitoring