

1. What is Power BI, and what are its three main components?

Power BI is a business analytics service by Microsoft that allows users to visualize data, share insights, and make data-driven decisions.

Three main components:

Power BI Desktop: The Windows application for building reports and data models.

Power BI Service (PowerBI.com): The online (cloud) platform for sharing, collaboration, and dashboarding.

Power BI Mobile: Apps for iOS and Android to view and interact with reports on mobile devices.

2. Name two business use cases for Power BI dashboards.

Sales Performance Tracking: Monitor real-time sales metrics, compare targets vs. actuals, and analyze trends.

Financial Reporting: Visualize financial KPIs such as revenue, expenses, profit margins, and automate periodic reports.

3. How do you download and install Power BI Desktop?

Visit the official Power BI website.

Click Download and choose the installer.

Run the installer and follow the on-screen instructions to complete the installation.

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

Power BI Desktop: Used for creating reports and data models locally on a PC; free to use.

Power BI Service: A cloud-based platform for publishing, sharing, collaborating, and scheduling data refresh; requires a license for sharing/collaboration features.

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 inside Power BI. It is used to connect to data sources, clean and transform data, and prepare it for analysis and modeling.

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

Interactive Dashboards: Power BI offers more advanced and interactive visualizations.

Automated Data Refresh: Schedules and automates data updates from multiple sources.

Collaboration: Easier sharing, version control, and access management via the cloud.

Scalability: Handles larger datasets and more complex data models than Excel.

8. Describe one limitation of the free version of Power BI.

Sharing Reports: Free users cannot share reports or dashboards with others in Power BI Service; sharing requires a Pro or Premium license.

9. What is a "published report" in Power BI Service?

A published report is a report created in Power BI Desktop and uploaded to the Power BI Service, making it available online for sharing, collaboration, and further analysis.

10. How does Power BI Mobile enhance accessibility?

Allows users to access, view, and interact with dashboards and reports on smartphones and tablets, providing data insights anywhere, anytime.

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

Aspect	Power BI	Tableau
Cost	More affordable, esp. for MS users	Generally more expensive
Integration	Excellent with MS ecosystem	Broad range, incl. non-MS sources
Ease of Use	Easier for beginners	Steeper learning curve, more advanced
Visualization	Strong, improving	Industry leader in visualizations
Deployment	Strong cloud & desktop options	Powerful desktop, strong server/cloud
Community	Large, growing	Large, mature

12. Explain how Power BI integrates with Azure services.

Connects directly to Azure data sources like Azure SQL Database, Azure Synapse, and Azure Blob Storage.

Supports embedding Power BI reports in Azure apps.

Leverages Azure Active Directory for secure authentication.

13. What are "gateways" in Power BI, and when are they needed?

Gateways are bridges that allow secure data transfer between on-premises data sources and the Power BI Service.

Needed when your data source is on-premises (not in the cloud) and you want to schedule refreshes or provide real-time data in Power BI Service.

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

Cost-effective: Lower licensing costs than many alternatives.

Productivity: Automated reporting saves hours of manual work.

Better decisions: Real-time, actionable insights lead to faster, more informed business decisions.

Integration: Seamless with Microsoft tools (Excel, Teams, Azure) increases adoption and reduces training costs.

15. What security features does Power BI offer for sensitive data?

Row-level security: Restricts data access per user.

Data encryption: Both in transit and at rest.

Azure Active Directory: Secure user authentication and SSO.

Data loss prevention: Policies and audit logs for compliance.

Workspace roles and permissions: Control who can view, edit, or publish content.