Q1.What is Data Analysis?

Ans. **Data analysis is defined as a process of cleaning, transforming, and modeling data to discover useful information for business decision-making. The purpose of Data Analysis is to extract useful information from data and take the decision based upon the data analysis.**

Q2.What are tools used for data analytics?

Ans. **Microsoft Excel, Python , R, jupyter notebook, power BI, Tableau etc.**

Q3.What are various steps involved in data analytics?

Ans. **Defining the question.**

- **Collecting the data.**
- **Cleaning the data.**
- **Analyzing the data.**
- **Sharing your results.**
- **Embracing failure.**
- **Summar**

Q4.What are responsibilities of Data Analyst?

Ans. **A data analyst oversees organizing data related to sales figures, market research, logistics, linguistics, or other behaviors. They use technical expertise to ensure that data is accurate and of high quality. Data is then analyzed, designed, and presented in a way that helps individuals, businesses, and organizations make better decisions.**

Q5.What are key skills Usually required for data analytics?

Ans.Data Visualization

1. **Data Cleaning**
2. **MATLAB**
3. **R**
4. **Python**
5. **SQL and NoSQL**
6. **Machine Learning**
7. **Linear Algebra and Calculus**
8. **Microsoft Excel**
9. **Critical Thinking**
10. **Communication**

Q6.What are common that data analyst problem encounter during analysis?

Ans.1. The amount of data being collected

2. Collecting meaningful and real-time data

3. Visual representation of data

4. Data from multiple sources

5. Inaccessible data

6. Poor quality data

7. Pressure from the top

8. Lack of support

9. Confusion or anxiety

10. Budget

11. Shortage of skills

12. Scaling data analysis

Q7.What is the difference between data analytics and data science?

Ans **Data Science: Data Science is a field that deals with extracting meaningful information and insights by applying various algorithms, processes., scientific methods from structured and unstructured data. This field is related to big data and one of the most demanded skills currently.**

Data science comprises mathematics, computations, statistics, programming, etc to gain meaningful insights from the large amount of data provided in various formats.

Data Analytics: Data Analytics is used to get conclusions by processing the raw data. It is helpful in various businesses as it helps the company to make decisions based upon the conclusions from the data. Basically, data analytics helps to convert a Large number of figures in the form of data into Plain English i.e., conclusions which are further helpful in making the decisions.

Below is a table of differences between Data Science and Data Analytics:

Feature	Data Science	Data Analytics

Coding Language	**Python is the most commonly used language for data science along with the use of other languages such as C++, Java, Perl, etc.**	**The Knowledge of Python and R Language is essential for Data Analytics.**
Programming Skills	**In- depth knowledge of programming is required for data science.**	**Basic Programming skills is necessary for data analytics.**
Use of Machine Learning	**Data Science makes use of machine learning algorithms to get insights.**	**Data Analytics doesn't makes use of machine learning.**
Other Skills	**Data Science makes use of Data mining activities for getting meaningful insights.**	**Hadoop Based analysis is used for getting conclusions from raw data.**
Scope	**The scope of data science is large.**	**The Scope of data analysis is micro i.e., small.**

Goals	**Data science deals with explorations and new innovations.**	**Data Analysis makes use of existing resources.**
Data Type	**Data Science mostly deals with unstructured data.**	**Data Analytics deals with structured data.**
Statistical Skills	**Statistical skills are necessary in the field of Data Science..**	**The statistical skills are of minimal or no use in data analytics.**