1) What is Data Analysis?

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

It is a subcomponent of data analytics that involves the use of technical tools and data handling techniques.

2) What are the tools used for data analysis?

1. Microsoft Excel
2. Python
3. R
4. Jupyter Notebook
5. Apache Spark
6. SAS
7. Microsoft Power BI
8. Tableau
9. KNIME

3) What are the various steps involved in any analytics project?

1. Find an Interesting Topic
2. Obtain and Understand Data
3. Data Preparation
4. Data Modelling
5. Model Evaluation
6. Deployment and Visualization

4) What are the responsibilities of a data analyst?

1. Strong mathematical skills to help collect, measure, organize and analyze data
2. Knowledge of programming languages like SQL, Oracle, R, MATLAB, and Python
3. Technical proficiency regarding database design development, data models, techniques for data mining, and segmentation.
4. Experience in handling reporting packages like Business Objects, programming (Javascript, XML, or ETL frameworks), databases
5. Proficiency in statistics and statistical packages like Excel, SPSS, SAS to be used for data set analyzing
6. Adapt at using data processing platforms like Hadoop and Apache Spark
7. Knowledge of data visualization software like Tableau, Qlik
8. Knowledge of how to create and apply the most accurate algorithms to datasets in order to find solutions
9. Problem-solving skills
10. Accuracy and attention to detail
11. Adapt at queries, writing reports, and making presentations
12. Team-working skills
13. Verbal and Written communication skills
14. Proven working experience in data analysis

5) Write some key skills required for a data analyst.

1. Cleansing and preparing data
2. Analyzing and exploring data
3. Expertise in statistics
4. Analyzing and visualizing data
5. Reports and dashboards
6. Communication and writing
7. Expertise in the domain
8. Solution-oriented

6) What are the common problems that data analysts encounter during data analysis?

1. collecting meaningful data
2. selecting the right analytics tool
3. data visualization
4. multiple-source data
5. low-quality data
6. lack of skills
7. scaling challenges
8. data security
9. budget limitations
10. lack of a data culture and
11. inaccessibility

7) What is the difference between data analytics and data science?

Data scientists use algorithms and machine learning to improve the ways that data supports business goals.

Data analysts collect, store, and maintain data and analyze results.