Ans: (a) Data Integration:

Data integration is the process of combing and unifying data from different sources into a single cohesive view. In many organizations, data is scattered across various database, files and systems, and integration this data is essential for obtaining a comprehensive understanding of the information. The main goals of data integration include:

1. Creating a unified View
2. Reducing Redundancy
3. Improving Data Quality
4. Enhancing Decision-Making
5. Facilitating Business intelligence
6. Enabling Cross-Functional Analysis
7. Supporting Data Warehousing

(b) Data Transformation Methods:

Data transformation involves converting data into a format suitable for analysis, ensuring that it meets the requirements of specific algorithms or business objectives. Various methods are employed to tranform raw data into a more useful and standardized form:

1. Normalisation
2. Standardization (Z-Score normalisation)
3. Attribute Transformation
4. Binning or Discretization
5. Encoding Categorical Variable
6. Aggregation
7. Smoothing
8. Data Cleaning

→ Data transformation is an essential step in the data preprocessing pipeline, ensuring that the data is in a suitable form for analysis and modelling.