**Answer to question 1:**

The exponential growth of data from vast variety of data sources has led to abundance of data. That data remains useless if no actionable information is derived from that for decision making. But that can only be achieved through robust tool and techniques.

From 1980s onwards many functionalities in database and database management systems evolved. Before long, database technology moved towards the development of advanced data systems, data warehousing and data mining.

Data mining is the process of discovering interesting patterns and knowledge from large amounts of data. It can be considered the result of the natural evolution of information technology but it has its roots in Database Management, Statistics and Machine Learning.

**Answer to question 2:**

The development of data collection and creation techniques made the basis for further development of data storage, retrieval, and query and transaction processing. After the development of database management systems, database technology moved towards advances database management systems, data warehousing and advanced data analysis. These systems incorporated new data models other than the existing relational model.

Advanced data analysis boosted after 1980s. All this development phase owes to the progress of for data storage technology.

**Answer to question 3:**

**Steps in the KDD process:**

1. **Data Cleaning:**

Here we remove the noise or inconsistent data, and make for missing values of the unstructured data.

1. **Data Integration:**

Data from many distributed data sources (like the data from different branches of a bank) is unified at one place in a summarized way at an abstract level.

1. **Data Selection:**

Since data mining is aimed at finding interesting patterns from data in an application domain (like business intelligence or fraud detection), data relevant to the specific task is chosen for further proceeding while the rest is left out.

1. **Data Transformation:**

Data is not always just ready for mining and pattern evaluation. Rather it needs to be transformed into appropriate for mining by performing summary or aggregation operations.

1. **Data Mining:**

This is the core step where intelligent tools and methods are applied to extract data patterns.

1. **Patterns Evaluation:**

As not all the data patterns are interesting, we need to evaluate the interestingness of the patterns. There are certain objective measures for interestingness.

1. **Knowledge Presentation:**

Patterns and mined knowledge is not always easily intelligible. Thus, knowledge representation and presentation skills are required.

**Answer to question 4:**

Knowledge base is the place that contains the knowledge, patterns and useful information that is iteratively for data selection. This is also used as the information for decision making.