**SQL**(Worksheet-1)

1. (A,D)

2. (A,B,C)

3. (B)

4. (B)

5. (A)

6. (C)

7. (B)

8. (B)

9. (D) alter table A modify D int;

Alter table A change D D int;

10. (C)

11. Data-warehouse is an information system which stores commutative data from different sources. It is easy to analyse because it stores data from multiple databases. It saves time for retrieving data from multiple sources because it helps to access the data from different sources in a single place. It is non-volatile in nature. Once the data is stored the data in data-warehouse data cannot be modified or updated.

12. **OLTP:** it defines online transactional processing. It retrieves, stores and processes the data from transaction in real time. Database uses OLTP.

**OLAP:** it defines online analytical processing. It uses complex queries to analyse the historical data from online transactional processing system. Data-ware house uses OLAP.

13. **Characteristics of Data-warehouse:** it is time-variant. That is, we can maintain our data for different intervals of time. It integrates the data from various sources of data. It scales all the similar data which is retrieved from different database. Data-ware house is always subject-oriented because it is proposed to handle with a specific operation. It is non-volatile in nature that is, when new data enters, it does not erase the previous data.

14. star-schema is a simplest schema among the data-mart schema. It is called star because of its physical structure resembles a star shape. In this structure, centre represents a fact table and the dimension tables at its peripheral represents star’s point. This schema is mainly used to build a data-warehouse and dimensional data-marts. In this schema, each logical dimension is denormalized into one table. It is easy to understand and provides optimal disk usage.

15. **SETL:** It is a high-level programming language based on the mathematical theory of sets. It provides many iterators to produce different loops over aggregate data structures. Its primary operations include union, intersection, and power set.