Worksheet \_1 SQL

Q1. 1. A and D

Q2. A,B and C

Q3. B

Q4.B

Q5.A

Q6.C

Q7.B

Q8.B

Q9.B

Q10.C

Q11. Data warehouse is a type of data management system that is designed to enable and support business intelligence activities, especially analytics. Data warehouses are intended to perform queries and analysis and often contain large amounts of historical data. The data within a data warehouse is usually derived from a wide range of sources such as application log files and transaction applications. A well-designed data warehouse will perform queries very quickly, deliver high data throughput, and provide enough flexibility for end users.

The key features of data warehouse are

1.Subject-oriented

2.Time variant

3.Non-volatile

4.Integrated

Q12. Difference between OLTP & OLAP

**OLTP-** It stands for online transaction processing. It provides transaction oriented in a 3 tier architecture. Oltp administrates the day to day transactions of an organization.

Uses of OLTP are as follows:

* ATM center is an OLTP application.
* OLTP handles the ACID properties during data transactions via the application.
* It’s also used for Online banking, Online airline ticket booking, sending a text message, add a book to the shopping cart.

OLAP- It stands for Online Analytical Processing. It consists of a type of software tools that are used for data analysis for business decisions. It provides an environment to get insights from the database retrieved from multiple database systems at one time.

The uses of OLAP are as follows:

* Spotify analyzed songs by users to come up with a personalized homepage of their songs and playlist.
* Netflix movie recommendation system.

**Q13**-

The characteristics of data warehouse are-

1.**Subject-oriented**- A data warehouse is always a subject oriented as it delivers information about a theme instead of organization’s current operations.

2.**Time variant**-In this data is maintained via different intervals of time such as weekly, monthly, or annually etc. It founds various time limit which are structured between the large datasets and are held in online transaction process (OLTP).

3.**Non-volatile-** It means the data resided in data warehouse is permanent. It also means that data is not erased or deleted when new data is inserted.

4**.Integrated**-  Integration means founding a shared entity to scale the all similar data from the different databases.

**Q14**-

A star schema is a conference for constructing the data into dimension tables, fact tables, and materialized views. All data is saved in columns, and metadata is needed to identify the columns that function as multidimensional objects.

A star schema is a relational schema where a relational schema whose design defines a multidimensional data model. The star schema is the explicit data warehouse schema. It is referred to as star schema because the entity-relationship diagram of this schemas reproduces a star, with points, diverge from the main table. The middle of the schema includes a high fact table, and the star is the dimension table.

**Q15-**