SQL Worksheet

Q1 and Q2 have one or more correct answers. Choose all the correct options to answer your question.

1. Which of the following is/are DDL commands in SQL?

A) Create
B) Update
C) Delete
D) ALTER
Ans) A and D

2. Which of the following is/are DML commands in SQL?
A) Update
B) Delete
C) Select
D) Drop
Ans) A and B

Q3 to Q10 have only one correct answer. Choose the correct option to answer your question.

3. Full form of SQL is:
A) Strut querying language
B) Structured Query Language
C) Simple Query Language
D) None of them
Ans) B

4. Full form of DDL is:
A) Descriptive Designed Language
B) Data Definition Language
C) Data Descriptive Language
D) None of the above.
Ans) B

5. DML is:
A) Data Manipulation Language
B) Data Management Language
C) Data Modeling Language
D) None of these
Ans) A

6. Which of the following statements can be used to create a table with column B int type and C floattype?
A) Table A (B int, C float)
B) Create A (b int, C float)
C) Create Table A (B int,C float)
D) All of them
Ans) C

7. Which of the following statements can be used to add a column D (float type) to the table A created above?
A) Table A (D float)
B) Alter Table A ADD COLUMN D float
C) Table A(B int, C float, D float)
D) None of them
Ans) B

8. Which of the following statements can be used to drop the column added in the above question?
A) Table A Drop D
B) Alter Table A Drop Column D
C) Delete D from A
D) None of them
Ans) B

9. Which of the following statements can be used to change the data type (from float to int) of the column D of table A created in above questions?
A) Table A (D float int)
B) Alter Table A Alter Column D int
C) Alter Table A D float int
D) Alter table A Column D float to int
Ans) B

10. Suppose we want to make Column B of Table A as primary key of the table. By which of the following statements we can do it?
A) Alter Table A Add Constraint Primary Key B
B) Alter table (B primary key)
C) Alter Table A Add Primary key B
D) None of them Q11 to Q15 are subjective answer type questions,
Ans) C

Answer them briefly.
11. What is data-warehouse?

A data warehouse is a type of data management system that is designed to enable and support business intelligence (BI) activities, especially analytics. Data warehouses are solely 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 data warehouse centralizes and consolidates large amounts of data from multiple sources. Its analytical capabilities allow organizations to derive valuable business insights from their data to improve decision-making. Over time, it builds a historical record that can be invaluable to data scientists and business analysts. Because of these capabilities, a data warehouse can be considered an organization's "single source of truth."

12. What is the difference between OLTP VS OLAP?

An OLAP system is designed to process large amounts of data quickly, allowing users to analyze multiple data dimensions in tandem. Teams can use this data for decision-making and problem-solving. In contrast, OLTP systems are designed to handle large volumes of transactional data involving multiple users.

13. What are the various characteristics of data-warehouse?

Data warehouses are characterized by being:

1. Subject-oriented: A data warehouse typically provides information on a topic (such as a sales inventory or supply chain) rather than company operations.
2. Time-variant: Time variant keys (e.g., for the date, month, time) are typically present.
3. Integrated: A data warehouse combines data from various sources. These may include a cloud, relational databases, flat files, structured and semi-structured data, metadata, and master data. The sources are combined in a manner that's consistent, relatable, and ideally certifiable, providing a business with confidence in the data's quality.

4. Persistent and non-volatile: Prior data isn't deleted when new data is added. Historical data is preserved for comparisons, trends, and analytics.

Data warehouse components are engineered for speed. When results are accessible quickly, they can be analyzed on the fly.

14. What is Star-Schema??

A star schema is a multidimensional data model used to organize data in a database so that it is easy to understand and analyze. Star schemas can be applied to data warehouses, databases, data marts, and other tools. The star schema design is optimized for querying large data sets.

15. What do you mean by SETL?

In order to create better decisions for business analytics, organizations increasingly use external structured, semi-structured, and unstructured data in addition to the (mostly structured) internal data. Current Extract-Transform-Load (ETL) tools are not suitable for this "open world scenario" because they do not consider semantic issues in the integration processing. Current ETL tools neither support processing semantic data nor create a semantic Data Warehouse (DW), a repository of semantically integrated data. SETL builds on Semantic Web (SW) standards and tools and supports developers by offering a number of powerful modules, classes, and methods for (dimensional and semantic) DW constructs and tasks. Thus it supports semantic data sources in addition to traditional data sources, semantic integration, and creating or publishing a semantic (multidimensional) DW in terms of a knowledge base. A comprehensive experimental evaluation comparing SETL to a solution made with traditional tools (requiring much more hand-coding) on a concrete use case, shows that SETL provides better programmer productivity, knowledge base quality, and performance.