

1. Which of the following is true about a VARCHAR?

0 / 1 point

- ☐ Its maximum length is denoted in brackets after the type name such as VARCHAR(10).
- ☐ It is a string of variable length.
- ☒ It uses the same amount of space in the database irrespective of the length of the actual data stored in it.
- ☐ Its length is fixed.

Expand

✖ Incorrect

Incorrect. Review the Data Types video.

2. Which of the following is an open source database?

1 / 1 point

- ☐ BigQuery
- ☐ Oracle
- ☒ PostgreSQL
- ☐ Db2

Expand

✔ Correct

Correct! PostgreSQL is open source.

3. Which statement is true with regard to the data access layer in a database management system software (DBMS)?

1 / 1 point

- ☐ It is where the data is stored.
- ☐ It encapsulates the application and business logic.
- ☐ The client typically directly accesses it.
- ☒ It contains an engine that compiles queries, retrieves data, and returns a result set.

Expand

✔ Correct

Correct! The database server contains an engine that compiles queries, retrieves and processes the data, and returns the result set.

4. Which NoSQL functionality does PostgreSQL use to store hierarchical data?

0 / 1 point

- ☐ Objects
- ☐ JSON
- ☐ EDB
- ☒ HSTORE

Expand

✖ Incorrect

Incorrect. Review the PostgreSQL video.

5. How can the Entity Relationship Diagram (ERD) model be used?

1 / 1 point

- ☒ The ERD model helps you to define entities and their attributes, and map them to tables, and identify the relationships between the tables.
- ☐ The ERD model helps you to design a database with a single table.
- ☐ The ERD model helps you to define the data in each row of a table.
- ☐ The ERD model helps you map data types to existing columns and rows.

Expand

✔ Correct

The ERD model helps you to define entities and their attributes, and map them to tables, and identify the relationships between the tables. Rather than being used as a model on its own, the ER Model is used as a tool to design relational databases.

6. Which of the following sources is NOT supported by the Db2 Web Console for loading data?

1 / 1 point

- ☐ Cloud Object Storage (IBM)
- ☐ S3 object storage (AWS)
- ☐ Delimited text files (local computer)
- ☒ Python code

Expand

✔ Correct

The Load Data utility does not load data stored in Python code.

7. What is the function of a foreign key?

1 / 1 point

- ☐ It is a unique value that identifies a table.
- ☒ It defines the relationship between tables.
- ☐ It is a unique value in a table.
- ☐ It is used to access a row of data in a table.

Expand

✔ Correct

Correct! A foreign key is a column in a table that contains the same information as the primary key in another table.

8. Which of the following is an advantage of indexing?

1 / 1 point

- ☐ Indexing increases performance of INSERT and UPDATE queries.
- ☐ Indexing quickly sorts data in a table.
- ☐ Indexing works well with unstructured data.
- ☒ Indexing quickly locates rows and reduces the need to sort the data.

Expand

✔ Correct

Correct! Indexing reduces the need to sort data by storing pointers to each row in the table so when you request a particular row, the SQL processor can use the index to quickly locate the row.

9. Which of the following is the best example illustrating data that fails the entity integrity constraint?

0 / 1 point

- ☐ Birth Date: 01/03/19782
- ☐ City: Alaska
- ☐ EmployeeID: NULL
- ☒ Primary key is duplicated

Expand

✖ Incorrect

Incorrect. Review the Relational Model Constraints video.

10. In which situation is it most appropriate to partition a database?

1 / 1 point

- ☐ When an instance requires both user schemas and system schemas
- ☒ For optimizing queries for data warehousing with large volumes of data.
- ☐ When it's necessary to store user access permissions in a table
- ☐ When there are many tables in an instance

Expand

✔ Correct

Correct! Partitioning is often used with very large data sets.

11. Which MySQL tool can you use to visually design a MySQL database?

0 / 1 point

- ☐ MySQL Workbench
- ☐ mysql
- ☒ phpMyAdmin
- ☐ mysqladmin

Expand

✖ Incorrect

Review the Getting Started with MySQL video.

12. Which command do you use to show the structure of a table?

0 / 1 point

- ☐ REPRESENT
- ☐ DESCRIBE
- ☐ DISPLAY
- ☒ SHOW

Expand

✖ Incorrect

Incorrect. Review the Creating Databases and Tables in MySQL video.

13. What does the “-u root” option in this command do? `mysqldump -u root employees > employeebackup.sql`

1 / 1 point

- ☐ Uses the root directory to find the database file that is to be backed up
- ☐ Lists users who have access to the root directory
- ☒ Specifies the username “root” when connecting to the server
- ☐ Uses the root directory to back up the database on the server

Expand

✔ Correct

Correct! The -u option allows you to specify a username, in this case, “root.”

14. On which operating systems can you install PostgreSQL?

1 / 1 point

- ☐ You cannot install PostgreSQL locally; it must be cloud-based
- ☐ macOS only
- ☒ macOS, Microsoft Windows, UNIX
- ☐ UNIX, UNIX like, or UNIX-based systems

Expand

✔ Correct

You can download and install PostgreSQL on your own servers, on a range of operating systems such as macOS, Windows, UNIX and UNIX-based or UNIX like systems.

15. How do you create views?

1 / 1 point

- ☐ From an entity relationship diagram
- ☐ Using the PostgreSQL GUI tool
- ☐ Using the mysql admin tool
- ☒ From SQL code

Expand

✔ Correct

Correct! You create views within a schema by entering the SQL code that defines the view.