

Your grade: **73.33%**

Your latest: 73.33% • Your highest: 73.33% • To pass you need at least 70%. We keep your highest score.

Next item →

1. Which situation is best for a combined NoSQL and relational database solution?

1 / 1 point

- ☐ Full data consistency and complicated joins
- ☐ Need flexible schema
- ☐ Data is largely unstructured
- ☒ Fast scaling and transaction support

✓ Correct

Correct! If you have too much data and need performance and need to scale fast, but at the same time, you also need transaction support and complex joins on your data, then you might think of a combined solution.

2. Which of the following is an advantage of partitioning and storing redundant data?

1 / 1 point

- ☐ Data does not need to be synchronized.
- ☐ Concurrency control
- ☐ Secure synchronization
- ☒ If one node fails, it can be retrieved elsewhere.

✓ Correct

Correct! If one node fails, that piece of data can be retrieved from another node.

3. In the BASE model what does it mean for data to be in a "soft state"?

0 / 1 point

- ☒ The availability of data is ensured by partitioning it.
- ☐ The data store values availability over consistency.
- ☐ Different replicas do not need to be mutually consistent all the time.
- ☐ The data store is accessible at all times.

✗ Incorrect

Incorrect. Review the ACID versus BASE Operations video.

4. Which trait is the most common to all of the four types of NoSQL databases?

1 / 1 point

- ☒ They are non-relational.
- ☐ They are partitioned.
- ☐ They are indexed.
- ☐ They use Key-Value pairs for queries.

✓ Correct

Correct! The most common trait amongst NoSQL databases is that they are non-relational in architecture.

5. Which term refers to offloading of database administration and maintenance from the end user?

1 / 1 point

- ☐ Software as a Service
- ☒ Database as a Service
- ☐ Administration as a Service
- ☐ NoSQL as a Service

✓ Correct

Correct! A fully managed service model, otherwise called database as a service (or DBaaS), offloads the administration and maintenance from the end-user and allows developers to focus on building applications with these modern databases.

6. In MongoDB, which aggregation stage can change the shape of a document?

0 / 1 point

- ☒ \$merge
- ☐ \$project
- ☐ \$match
- ☐ \$group

 **Incorrect**

Incorrect. Review the Aggregation Framework video.

7. Fill in the blank. MongoDB follows a _____ approach.

0 / 1 point

- ☐ test-first, code-later
- ☐ design-first, code-later
- ☒ code-first, design-later
- ☐ test-first, design later

 **Incorrect**

Incorrect. Review the Advantages of MongoDB video.

8. In MongoDB, what is a group of similar stored documents called?

1 / 1 point

- ☐ An index
- ☐ A cluster
- ☒ A collection
- ☐ An aggregation

 **Correct**

Correct! MongoDB documents of a similar type are grouped into a collection.

9. Select the true statement regarding MongoDB indexes.

1 / 1 point

- ☐ Indexes ignore and do not contain information about a document's disk location.
- ☐ Indexes are stored in a table.
- ☒ Indexes include the database fields.
- ☐ Indexes are stored in random order.

 **Correct**

Correct! Indexes store the fields being indexed.

10. Which is an advantage of sharding?

1 / 1 point

- ☒ It increases throughput by directing queries to relevant partitions.
- ☐ It provides fault tolerance.
- ☐ It prevents you from accidentally deleting your database.
- ☐ It creates redundancy.

 **Correct**

Correct! When you partition your data across shards, you increase your throughput by directing your queries only to relevant shards.

11. What are the three main data type categories in Cassandra Query Language (CQL)?

1 / 1 point

- ☐ Blobs, User-defined, and ASCII
- ☐ Blobs, Built-in, and Collections
- ☐ ASCII, User-Defined, and Built-in
- ☒ User-Defined, Built-in, and Collections



Correct! In CQL, there are many data types, but they can be grouped into three main categories: built-in data types, collection data types, and user-defined data types.

12. Which of these four approaches is the slowest way to make data changes in Apache Cassandra?

1 / 1 point

- ☐ Use UPDATE data with Time-To-Live.
- ☐ Use INSERT data with Time-To-Live.
- ☐ Use UPDATE data with the full primary key specified.
- ☒ Use Lightweight Transactions.



Correct! You can instruct Cassandra to look for the data, read it, and only then perform a given operation by using Lightweight Transactions, but Lightweight Transactions are slower than the normal INSERT/UPDATE in Cassandra.

13. Select three key features used by relational databases but not by Cassandra.

1 / 1 point

- ☐ Consistency, distributed, scalable
- ☐ Distributed, scalable, fault-tolerant
- ☐ Join support, aggregation support, scalable
- ☒ Join support, aggregation support, transaction support



Correct! Cassandra, by design, does not incorporate three major features of relational databases and thus should not be seen as a drop-in replacement for a relational database: It does not support joins, it has limited aggregation support, and it has limited support for transactions.

14. What are the two primary functions of a “partition key”? Select two.

1 / 1 point

- ☐ It adds uniqueness to each entry in a table.
- ☒ It optimizes the read performance of queries.



Correct! The primary key helps to optimize read queries.

- ☐ It specifies the order in which the data is arranged inside the partition.
- ☒ It determines the location of the data in a cluster.

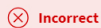


Correct! A partition key determines the data locality in a cluster.

15. What do you need to start data distribution in Cassandra?

0 / 1 point

- ☐ Tokens
- ☒ A key value hash
- ☐ Queries
- ☐ Data sets



Incorrect
Review the Key Features of Apache Cassandra video.