Your grade: 66.66%

Your latest: 66.66% • Your highest: 66.66% • To pass you need at least 70%. We keep your highest score.

Try again

1. Which requirement would prompt you to consider choosing NoSQL over RDBMS? 1 / 1 point

- (•) Flexible schema
- ( ) Complicated joins
- ( ) Full data consistency
- ( ) Multi-document transactions

Correct
Correct! If your data is unstructured and could benefit from a flexible schema, then a NoSQL database will make more sense.

2. What is one way that a distributed NoSQL database usually shards data? 0 / 1 point

- ( ) By grouping all records that have the same key on the same server
- ( ) By grouping all records that have the same data on the same server
- (•) By distributing all records that share the same key across multiple servers
- ( ) By grouping all keys numerically

Incorrect
Incorrect. Review the Distributed Databases video.

3. In the BASE model what does it mean for data to be in a “soft state”? 0 / 1 point

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

Incorrect
Incorrect. Review the ACID versus BASE Operations video.

4. Which of the following makes NoSQL databases most appropriate for use with cloud computing? 1 / 1 point

- ( ) They support complex queries.
- ( ) They are denormalized.
- ( ) They have intuitive data structures.
- (•) Their distributed nature makes them easily deployed and operated on clusters of servers.

Correct
Correct! The distributed data nature of NoSQL databases means that they can be deployed and operated on clusters of servers in cloud architectures, thereby massively reducing cost.”

5. Which term refers to offloading of database administration and maintenance from the end user? 1 / 1 point

- (•) Database as a Service
- ( ) Software as a Service
- ( ) NoSQL as a Service
- ( ) Administration 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 of the following common aggregation stages takes the outcome from the previous stage and stores it in a target collection? 1 / 1 point

- (•) $merge
- ( ) $count
- ( ) $sort
- ( ) $project

Correct
Correct! The "$merge" aggregation stage takes the outcome from the previous stage and stores it in a target collection.

7. Select the statement that describes how MongoDB manages rapidly changing schemas. 1 / 1 point

- ( ) MongoDB uses both a fixed schema and an updatable schema.
- (•) MongoDB utilizes an evolving schema.
- ( ) MongoDB uses a fixed schema.
- ( ) MongoDB requires multiple processes for managing rapidly changing schema.

Correct
Correct! MongoDB utilizes an evolving schema.

8. Which Python data structure is most similar to a document? 1 / 1 point

- ( ) A tuple
- ( ) A string
- ( ) An object
- (•) A dictionary

Correct
Correct! Documents are associative arrays like JSON objects or Python dictionaries.

9. Select the true statement regarding MongoDB indexes. 0 / 1 point

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

Incorrect
Incorrect. Review the Indexes video.

10. What is the primary purpose of replication? 1 / 1 point

- ( ) It prevents you from accidentally deleting data.
- (•) If one server fails, you still have multiple copies of the data present.
- ( ) It allows you to partition large data sets.
- ( ) It increases throughput by directing queries to relevant partitions.

Correct
Correct! It provides you with a highly available database during failures or during periods of planned maintenance.

11. What are the three data types in a collection? 1 / 1 point

- ( ) Lists, Dictionaries, and Arrays
- ( ) Blobs, Bigints, and ASCII
- (•) Lists, Maps, and Sets
- ( ) Built-in, User-defined, and Lists

Correct
Correct! Within the collection data types category, there are three data types: lists, maps, and sets.

12. Which of these four approaches is the slowest way to make data changes in Apache Cassandra? 1 / 1 point

- (●) Use Lightweight Transactions.
- ( ) Use UPDATE data with the full primary key specified.
- ( ) Use UPDATE data with Time-To-Live.
- ( ) Use INSERT data with Time-To-Live.

Correct
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. Which features set Cassandra Apache apart from other NoSQL databases? 0 / 1 point

- ( ) Primary/secondary architecture and fast write throughput
- ( ) Simple peer-to-peer architecture and scalability
- ( ) Primary/secondary architecture and data consistency
- (●) Simple peer-to-peer architecture and fast write throughput

Incorrect
Incorrect. Review the Overview of Cassandra video.

14. What are the two primary functions of a “partition key”? Select two. 1 / 1 point

- [x] It determines the location of the data in a cluster.

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

- [x] It optimizes the read performance of queries.

Correct
Correct! The primary key helps to optimize read queries.

- [ ] It adds uniqueness to each entry in a table.
- [ ] It specifies the order in which the data is arranged inside the partition.

15. What do you need to start data distribution in Cassandra? 0 / 1 point

- ( ) Queries
- ( ) Data sets
- (●) Tokens
- ( ) A key value hash

Incorrect
Review the Key Features of Apache Cassandra video.