

# Question based on Lec 3 – JS & NOSQL

## Single Answer

1. What type of programming language is JavaScript?
  - a) Compiled
  - b) **Interpreted**
  - c) Static
  - d) Procedural
2. What does JavaScript's "single-threaded" nature imply?
  - a) It cannot perform asynchronous operations.
  - b) **It executes code sequentially unless asynchronous mechanisms are used.**
  - c) It supports multi-threading by default.
  - d) It is only used for server-side programming.
3. What keyword is used to create an object in JavaScript using a constructor function?
  - a) function
  - b) class
  - c) **new**
  - d) this
4. In JavaScript, what does the this keyword refer to in the global context?
  - a) The current object
  - b) **The global object (e.g., window in browsers)**
  - c) Undefined
  - d) The parent object
5. What is the main advantage of using closures in JavaScript?
  - a) To improve performance
  - b) **To create private variables and encapsulate scope**
  - c) To access global variables easily
  - d) To reduce memory usage
6. What problem does Promises solve in JavaScript?
  - a) **Callback hell caused by nested asynchronous tasks**
  - b) Memory leaks in applications
  - c) Synchronous execution of code
  - d) Lack of support for classes
7. Which NoSQL database is best suited for handling relationship-heavy data?
  - a) MongoDB    **complex , semi structure**
  - b) Redis    **flat lookup, caching**
  - c) **Neo4j**    **relationship heavy**
  - d) Cassandra    **big data, analytic**
8. What does CAP theorem state about distributed systems?
  - a) They can guarantee all three properties: Consistency, Availability, and Partition Tolerance.

- b) They can guarantee only two out of three properties: Consistency, Availability, Partition Tolerance.
  - c) They prioritize Partition Tolerance over Availability and Consistency.
  - d) They cannot guarantee any property reliably.
9. Which type of NoSQL database stores data as key-value pairs?
- a) Document-oriented database
  - b) Column-family database
  - c) Key-value store database
  - d) Graph database
10. What is MongoDB's default behavior for reads and writes?
- a) Reads and writes occur on secondary instances by default.
  - b) Reads occur on primary instances; writes occur on secondary instances by default.
  - c) Reads and writes occur on primary instances by default.
  - d) Writes are distributed across all instances by default.

#### Multiple Answer

11. Which features describe JavaScript? (Select two correct answers.)
- a) Dynamically typed
  - b) Multi-threaded
  - c) Supports OOP and functional programming
  - d) Blocking I/O model
12. Which methods are supported by Promises in JavaScript? (Select three correct answers.)
- a) then()
  - b) catch()
  - c) finally()
  - d) await()
13. Which databases fall under the category of column-family stores? (Select two correct answers.)
- a) Cassandra
  - b) MongoDB
  - c) HBase
  - d) Neo4j
14. Which properties define NoSQL databases? (Select three correct answers.)
- a) Schema-free
  - b) Distributed architecture
  - c) Full ACID support
  - d) Horizontal scalability
15. Which are valid MongoDB operations? (Select three correct answers.)
- a) Insert documents into collections
  - b) Update documents in collections
  - c) Remove documents from collections
  - d) Create relationships between collections

#### Fill in the Blanks

16. JavaScript supports multi-paradigm programming paradigms, including OOP and functional programming.
17. The this keyword is used to access an object's properties or methods within its scope.
18. A closure in JavaScript allows access to an outer function's scope from an inner function.
19. promises is used to handle asynchronous execution without nesting callbacks.
20. A graph database stores entities and relationships between them as nodes and edges.