1) What do you understand by NoSQL databases? Is MongoDB a NoSQL database? explain.

At the present time, the internet is loaded with big data, big users, big complexity etc. and also becoming more complex day by day. NoSQL is answer of all these problems, It is not a traditional database management system, not even a relational database management system (RDBMS). NoSQL stands for "Not Only SQL". NoSQL is a type of database that can handle and sort all type of unstructured, messy and complicated data. It is just a new way to think about the database.

Yes. MongoDB is a NoSQL database.

2) Which are the different languages supported by MongoDB?

MongoDB provides official driver support for C, C++, C#, Java, Node.js, Perl, PHP, Python, Ruby, Scala, Go and Erlang.

You can use MongoDB with any of the above languages. There are some other community supported drivers too but the above mentioned ones are officially provided by MongoDB.

3) What are the different types of NoSQL databases? Give some example.

NoSQL database can be classified as 4 basic types:

1. **Key value store NoSQL database**
2. **Document store NoSQL database**
3. **Column store NoSQL database**
4. **Graph base NoSQL databse**

There are many NoSQL databases. MongoDB, Cassandra, CouchBD, Hypertable, Redis, Riak, Neo4j, HBASE, Couchbase, MemcacheDB, Voldemort, RevenDB etc. are the examples of NoSQL databases.

4) Is MongoDB better than other SQL databases? If yes then how?

MongoDB is better than other SQL databases because it allows a highly flexible and scalable document structure.

For example:

- One data document in MongoDB can have five columns and the other one in the same collection can have ten columns.
- MongoDB database are faster than SQL databases due to efficient indexing and storage techniques.

5) What type of DBMS is MongoDB?

MongoDB is a document oriented DBMS

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6) What is the difference between MongoDB and MySQL?

Although MongoDB and MySQL both are free and open source databases, there is a lot of difference between them in the term of data representation, relationship, transaction, querying data, schema design and definition, performance speed, normalization and many more. To compare MySQL with MongoDB is like a comparison between Relational and Non-relational databases.

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7) Why MongoDB is known as best NoSQL database?

MongoDb is the best NoSQL database because, it is:

Document Oriented

Rich Query language

High Performance

Highly Available

Easily Scalable

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8) Does MongoDB support primary-key, foreign-key relationship?

No. By Default, MongoDB doesn't support primary key-foreign key relationship.

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9) Can you achieve primary key - foreign key relationships in MongoDB?

We can achieve primary key-foreign key relationship by embedding one document inside another. For example: An address document can be embedded inside customer document.

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10) Does MongoDB need a lot of RAM?

No. There is no need a lot of RAM to run MongoDB. It can be run even on a small amount of RAM because it dynamically allocates and de-allocates RAM according to the requirement of the processes.

11) Explain the structure of ObjectID in MongoDB.

ObjectID is a 12-byte BSON type. These are:

- **4 bytes value representing seconds**
- **3 byte machine identifier**
- **2 byte process id**
- **3 byte counter**

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12) Is it true that MongoDB uses BSON to represent document structure?

Yes.

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13) What are Indexes in MongoDB?

In MondoDB, Indexes are used to execute query efficiently. Without indexes, MongoDB must perform a collection scan, i.e. scan every document in a collection, to select those documents that match the query statement. If an appropriate index exists for a query, MongoDB can use the index to limit the number of documents it must inspect.

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14) By default, which index is created by MongoDB for every collection?

By default, the_id collection is created for every collection by MongoDB.

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15) What is a Namespace in MongoDB?

Namespace is a concatenation of the database name and the collection name. Collection, in which MongoDB stores BSON objects.

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16) Can journaling features be used to perform safe hot backups?

Yes.

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17) Why does Profiler use in MongoDB?

MongoDB uses a database profiler to perform characteristics of each operation against the database. You can use a profiler to find queries and write operations

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18) If you remove an object attribute, is it deleted from the database?

Yes, it be. Remove the attribute and then re-save() the object.

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19) In which language MongoDB is written?

MongoDB is written and implemented in C++.

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20) Does MongoDB need a lot space of Random Access Memory (RAM)?

No. MongoDB can be run on small free space of RAM.

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21) What language you can use with MongoDB?

MongoDB client drivers supports all the popular programming languages so there is no issue of language, you can use any language that you want.

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22) Does MongoDB database have tables for storing records?

No. Instead of tables, MongoDB uses "Collections" to store data.

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23) Do the MongoDB databases have schema?

Yes. MongoDB databases have dynamic schema. There is no need to define the structure to create collections.

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24) What is the method to configure the cache size in MongoDB?

MongoDB's cache is not configurable. Actually MongoDb uses all the free spaces on the system automatically by way of memory mapped files.

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25) How to do Transaction/locking in MongoDB?

MongoDB doesn't use traditional locking or complex transaction with Rollback. MongoDB is designed to be light weighted, fast and predictable to its performance. It keeps transaction support simple to enhance performance.