

### **Q #1) What is .Net framework?**

**Answer:** It is a platform for building various applications on windows. It has a list of inbuilt functionalities in the form of class, library, and APIs which are used to build, deploy and run web services and different applications. It supports different languages such as C#, VB .Net, Cobol, Perl, etc.

This framework supports the object-oriented programming model.

### **Q #2) What is Dependency Injection?**

Dependency Injection (DI) is a programming technique that makes a class independent of its dependencies.

### **Q #3) What is Identity?**

ASP.NET Core Identity: Is **an API that supports user interface (UI) login functionality.**

Manages users, passwords, profile data, roles, claims, tokens, email confirmation, and more.

### **Q #4) What is Caching?**

**Answer:** Caching means storing data temporarily in the memory so that the application can access the data from the cache instead of looking for its original location. This increases the performance of the application and its speed. System.Runtime.Caching namespace is used for Caching information in .Net.

**Given below are the 3 different types of Caching:**

- Page Caching
- Data Caching
- Fragment Caching

### **Q #5) Creating APIs , Testing and consuming them.**

- Postman
- Swagger

### **Q #6) How to optimizing highly traffic system to avoid system crash .**

- Use of APIs

### **Q #7) Why do we use MSMQ?**

**Microsoft Message Queuing**, or MSMQ, is technology for asynchronous messaging. Whenever there's need for two or more applications (processes) to send messages to each other without having to immediately know results, MSMQ can be used. MSMQ can communicate between remote machines, even over Internet. It's free and comes with Windows, but is not installed by default.

**Q-8: What is LINQ?**

It is an acronym for Language integrated query which was introduced with visual studio 2008. LINQ is a set of features that extend query capabilities to the .NET framework language syntax that allows data manipulation irrespective of the data source. LINQ bridges the gap between the world of objects and the world of data.

**Q-9: What is MSIL?**

MSIL is the Microsoft Intermediate Language, it provides instructions for calling methods, storing and initializing values, memory handling, exception handling and so on. All the .NET codes are first compiled to Intermediate Language.

**Q-10: What are the different types of constructors in c#?**

Following are the types of constructors in C#:

- Default Constructor
- Parameterized constructor
- Copy Constructor
- Static Constructor
- Private Constructor

**Q-11: What is delegate in .NET?**

A delegate in .NET is similar to a function pointer in other programming languages like C or C++. A delegate allows the user to encapsulate the reference of a method in a delegate object. A delegate object can then be passed in a program, which will call the referenced method. We can even use a delegate method to create a custom event in a class.

**Q-12: Explain role-based security.**

Role-based security is used to implement security measures based on the role assigned to the users in the organization. Then we can authorize users based on their roles in the organization. For example, windows have role-based access like user, administrators, and guests.

### Q-13: What is **dependency injection** (DI)?

. NET supports the **dependency injection** (DI) software design pattern, which is a technique for achieving Inversion of Control (IoC) between classes and their dependencies. Dependency injection in . NET is a first-class citizen, along with configuration, logging, and the options pattern