Short Questions [The .NET Technology]

What is .NET framework?

.NET is one of the platforms provided by Microsoft, which is used to build a variety of applications using Windows.
The ability to develop classes, libraries, and APIs and run, debug, and deploy code onto web services and applications form are the key uses of this framework. It supports a lot of languages, and you can work with everything from C# to VB all the way to Perl, and more.
The object-oriented model is championed here in the .NET framework

What are some of the common components of .NET?

There are a lot of components that make up the .NET framework, and some of them are as follows:

- .NET Class Library
- .NET Framework
- Language Runtime
- Application Domain
- Profiling

What does JIT stand for in .NET?

JIT is the abbreviation of Just in Time. It is a compiler that is used to convert intermediate code into native code easily.
In .NET, during execution, the code is converted into the native language, also called the byte code. This is processed by the CPU, and the framework helps with the conversion.

What is the meaning of MSIL?

MSIL is the abbreviation of Microsoft Intermediate Language. It is used to provide the instructions required for operations such as memory handling, exception handling, and more. It can also provide instructions to initialize and store values and methods easily.

What is CTS?

CTS stands for Common Type System. It is a set of structured rules that govern what a data type should be for the corresponding values given by a user. It is used to describe all of the data types that are used in an application that the user is building.

What is CLS?

CLS stands for Common Language Specification in .NET. It is put into place to ensure that the application developer is capable of inter-language operations if required. It is a reusable aspect among all of the .NET compatible languages.

What does CLR stand for in .NET?

CLR stands for Common Language Runtime. It forms to be the most vital component of .NET as it provides the foundation for many applications to run on.
If a user writes an application in C#, it gets compiled and converted to intermediate code. After this, CLR takes up the code and works on it with respect to the following aspects:

- Memory management
- Security protocols
- Libraries for loading
- Thread management

What is the difference between an object and a class in .NET?

Object	Class
An instance of a class	The template for creating an object
A class becomes an object after instantiation	The basic scaffolding of an object
Used to access properties from a class	The description of methods and properties

What is the meaning of garbage collection?

Garbage collection is a process that is used to maintain various aspects of memory to prevent memory leaks during program execution.
An entity called the garbage collector is used to allocate and de-allocate memory as and when required by an application. This is done by performing checks on the references of variables and objects used by the application. If an object is no longer required by the application, the memory is de-allocated and freed up.

What is the use of GAC in .NET?

GAC is the abbreviation of Global Assembly Cache. GAC is a part of CLR, which is used to store the assemblies that are shared across all of the applications. A user can make use of the Gacutil application to add any file into GAC easily.

What are the types of memories supported in the .NET framework?

There are two types of memories present in .NET as listed below:

- **Stack**: Used for static memory allocation
- **Heap**: Used for dynamic memory allocation