**Ques 1. What is the main component in the .Net Framework? (T)**

**Sol 1:**

There are main two components of .NET framework i.e:

1. Common Language Runtime
2. Class Library

**Common Language Runtime(CLR)**

CLR provides runtime environment for the execution of a program written in .NET framework.The code that are written in the language that .net framework support are executed by the CLR.CLR is responsible for the memory management of such codes and also not explicit action is required.Main components of CLR are:

i. Common LAnguage System(CLS)

ii.Common Type System(CTS)

iii.Garbage Collection(GC)

iv.Just-In Time Compiler(JIT)

**Class Library**

Class Library is a collection of related classes that can be used in the program.There are two types of class library

i.Base Class Library(BCL)

BCL is common for all type of framework.

ii.Framework Class Library(FCL)

FCL varies from framework to framework.

**Ques 2. Current .Net Standard framework and Current core framework?`(T)**

**Sol 2:**

.Net Standard Framework:4.8

Current Core framework:3.1

**Ques 3. Difference between Managed and Unmanaged code? (T)**

**Sol 3:**

There are various languages that are supported by .Net framework.If the program is written using any of the languages that the framework supports then that framework is compiled by CLR or the program that hit the CLR is known as **managed code**.eg of the languages that .Net framework support are C#,VB,Python,etc.

The code which is written in any of the languages that are not supported by .Net framework are not compiled by CLR or they do not hit the CLR.Such codes are known as **unmanaged code**.

**Ques 4. What do you mean by MSIL Code? (T)**

**Sol 4:**

Whenever we compile the application the compiler of the respective language compiles the application and converts the code into intermediate code or MSIL.A portable executable(PE) file is created after the code is compiled and it consists of Metadata and Assembly.The extension of MSIL code is either .exe or .dll.

**Ques 5. What is the difference between .Net and .Net Core Frameworks? (T)**

**Sol 5:**

.Net is not an open source and works only on Windows whereas .Net core framework was developed to overcome the limitation of .Net.So,.Net Core framework is an open source and also works on different operating systems like Linux,Mac,etc.

**Ques 6. Explain the execution process of managed code in .Net? (T)**

**Sol 6:**

Initially the compiler of the respective language is used to compile the application.Eg:if the application is created using C# then C# compiler is used to compile the code.After compilation MSIL code is generated.This MSIL code is then handled by CLR.The CLR compiler called Just-In Time compiler is then responsible for converting MSIL code into native code.This native code is the executable code.

