**OGUNDIPE IDRIS OLUWASEYI H/CS/23/1080**

**Question 1**

**Write a short note on the evolution of .Net Framework and C# (100 words)**

The .NET Framework and C# have come a long way since their inception in the early 2000s. Over the years, the .NET Framework has undergone several updates, providing new functionalities, improved performance, and enhanced security features. Similarly, C# has evolved as well, with new language features, better performance, and improved integration with other languages. With the introduction of .NET Core, the framework's cross-platform capabilities were expanded, enabling software development on Linux and macOS. Today, .NET 5 continues this evolution by offering a unified platform for building a wide variety of applications, including web, mobile, desktop, and cloud-based solutions.

**Question 2**

**Explain the following terms, Mono, Xamarin, COM, .Net Core,Unity C#,REST**

1. **Mono**: it is an open-source implementation of .NET Framework for cross-platform apps.

2. **Xamarin**: This is a platform for building cross-platform mobile apps with C# and .NET.

3. **COM**:COM (Component Object Model) is a platform-independent system for creating software components.

4. .**NET Core**: This is an open-source, cross-platform, modular framework for building apps.

5. **Unity**: This is a game dev platform using C# for creating 2D, 3D, VR, AR games and apps.

6. **REST**: REST (Representational State Transfer) is an architectural style for building web services and APIs using standard HTTP methods.

**Question 3**

**Critically, explain ANY three key functions of CLR (50 words)**

1. **Memory Management**: CLR allocates and deallocates memory for objects, manages memory fragmentation, and performs automatic memory cleanup through garbage collection.

2. **Exception Handling**: CLR provides a robust mechanism for handling exceptions, enabling structured error handling, and ensuring proper cleanup of resources in case of an error.

3. **Security**: CLR enforces code access security, verifies the permissions required to access resources, and ensures that code running in the .NET environment operates within the defined security constraints.