

# Mid-Level Assessment Topics - MSTD Jan 2025 Batch

## .NET Ecosystem

- .NET Framework, .NET Core, .NET 5+
- .NET Framework and Ecosystem
- Core Components and Execution Model
- Project Structure, Configuration, and Development Tools
- Security, Assemblies, and Dependency Management
- Application Types in .NET

## C# Language

- Data Types
- Operators
- Methods
- Object Oriented Programming
  - Encapsulation
  - Inheritance
  - Polymorphism
  - Abstraction
- Formatting and Parsing
- Exception Handling
- Properties
- Indexers
- Collections
- Generics
- Delegates and Events
- LINQ and Operators
- Memory Management and File IO
- Thread programming
- TPL

Asynchronous programming

Serialization

Reflection

Attributes

## **ASP.NET MVC & MVC Core**

MVC Architecture

Routing

Controllers

Views

Models

Tag Helpers

HTML Helpers

Data Access

ADO.NET

Entity Framework

Dependency Injection (DI)

State Management

Security

Filters

Custom Error Handling

Deployment