

C# 6.0 PROGRAMMING

This test is designed for the developer to measure proficiency in using the C# programming language to develop applications for the .NET Framework 4.6. The Secure Evaluation Mode and Remote versions of this test will contain a minimum of 51 questions and will require a typical time of 61 minutes. The Secure Interview Mode and QwikChek versions will provide as many questions as the test taker can answer within an approximate 37 minute time limit.

Following is a description of each sub-topic on the test:

Attributes, Properties and Fields analyzes the use of attributes to add metadata to the assembly and the use of properties as means of accessing data in an object using C# 6.0.

Collections, Arrays and Generics measures knowledge of the use of the framework collection classes and the generic versions of these using C# 6.0.

Multi-Threaded Development assesses knowledge of the correct use of threads and tasks to enable multiple operations to take place concurrently using C# 6.0.

Performance and Optimization determines understanding of key non-functional aspects of C# 6.0 code: predicting and analyzing the performance of a C# application, optimizing algorithms and disposal of unmanaged resources.

C# Syntax measures knowledge of the syntax for the C# 6.0 language, covering keywords, the correct formation of C# statements, assignment of variables and the use of nulls.

C# Data Types tests knowledge of the use of data types in C# 6.0, including the built-in data types and conversion between types.

Strings, Text Encoding and Regular Expressions assesses understanding of routine string processing, the immutability of string objects, string concatenation, text encoding and regular expressions in C# 6.0.

Input/Output and Stream Processing determines understanding of the fundamental use of the I/O system classes to use files and folders and access streams in C# 6.0.

Operators and Program Flow determines understanding of the fundamental constructs governing the manipulation of data and control of code execution in C# 6.0.

Methods and Parameters tests understanding of how methods are called in C# 6.0, including how parameters are passed and use of the void keyword.

Classes and Information Hiding analyzes knowledge of the construction of classes in C# 6.0 and the anatomy of a properly formed class.

Inheritance, Polymorphism and Interfaces measures knowledge of object-oriented features of inheritance, polymorphism and interfaces using C# 6.0.

Error Handling assesses understanding of the mechanisms to handle errors, including exception handling, in C# 6.0.

Delegates, Events and Anonymous Methods tests knowledge of event handling in C# 6.0 programs using delegates and anonymous methods, including lambda expressions.

Namespaces and Assemblies measures understanding of the techniques for methodical organization and distribution of C# 6.0 code.

LINQ assesses knowledge about Language Integrated Natural Query (LINQ) extensions for C# 6.0.

Dynamic Programming assesses knowledge of reflection, generic covariance, and named and optional arguments available in C# 6.0.