**Section 1: Getting Started with C# and Programming Concepts**

**1.** Which of the following best describes a **computer language**?  
a) A tool for drawing diagrams  
b) A way for humans to communicate with computers  
c) A type of operating system  
d) A hardware component  
**Answer:** b) A way for humans to communicate with computers

**2.**Which of the following is an example of a **high-level programming language**?  
a) Machine code  
b) Assembly language  
c) C#  
d) Binary code  
**Answer:** c) C#

**3.**What is the main feature of **Object-Oriented Programming (OOP)**?  
a) Writing programs without variables  
b) Grouping data and methods into objects  
c) Only using numbers in code  
d) Writing code without functions  
**Answer:** b) Grouping data and methods into objects

**4.**Which of the following is a **real-world application** of programming?  
a) Designing a car engine  
b) Creating a mobile app  
c) Mixing paint colors  
d) Building a chair  
**Answer:** b) Creating a mobile app

**5.**Which statement is true about a **developer** compared to a programmer?  
a) Developers only write code without testing it  
b) Developers often work on the full process from planning to deployment  
c) Developers never work in teams  
d) Developers use only one language  
**Answer:** b) Developers often work on the full process from planning to deployment

**6.**C# was developed by which company?  
a) Apple  
b) Microsoft  
c) Google  
d) IBM  
**Answer:** b) Microsoft

**7.**What does the **“#”** in C# represent?  
a) A musical note  
b) Four plus signs (++)  
c) A mathematical symbol for addition  
d) A hashtag from social media  
**Answer:** b) Four plus signs (++)

**8.**Which of the following is **NOT** a benefit of learning C#?  
a) Cross-platform development  
b) Strong support from Microsoft  
c) Ability to run without a computer  
d) Large community and resources  
**Answer:** c) Ability to run without a computer

**9.**Which one is **NOT** something you can build with C#?  
a) Web applications  
b) Mobile apps  
c) Space rockets  
d) Desktop software  
**Answer:** c) Space rockets

**10.**Which of these is a **success tip** for C# developers?  
a) Ignore learning about frameworks  
b) Practice regularly and build projects  
c) Only read theory without coding  
d) Avoid asking questions in communities  
**Answer:** b) Practice regularly and build projects

**Section 2: Setting Up Environment & Writing First Code**

**1.**What does **SDK** stand for in .NET SDK?  
a) Software Design Kit  
b) Software Development Kit  
c) System Development Kernel  
d) Software Data Keeper  
**Answer:** b) Software Development Kit

**2.**Which software is commonly used as an **IDE** for C# development?  
a) Photoshop  
b) Visual Studio  
c) Excel  
d) Chrome  
**Answer:** b) Visual Studio

**3.**What is usually the first program written when learning a new programming language?  
a) Print Your Name  
b) Hello World  
c) Math Calculator  
d) Login Form  
**Answer:** b) Hello World

**4.**Which key feature does an **IDE** provide?  
a) Only storing images  
b) Writing, compiling, and running code  
c) Making phone calls  
d) Browsing the internet  
**Answer:** b) Writing, compiling, and running code

**5.**What is a **variable** in C#?  
a) A fixed number that cannot change  
b) A storage location with a name that holds a value  
c) A tool for drawing shapes  
d) A special button on the keyboard  
**Answer:** b) A storage location with a name that holds a value

**6.**Which of these is a **primitive data type** in C#?  
a) string  
b) car  
c) website  
d) folder  
**Answer:** a) string

**7.**What is the correct range of the **int** data type in C#?  
a) -32,768 to 32,767  
b) -2,147,483,648 to 2,147,483,647  
c) 0 to 255  
d) 0 to 65,535  
**Answer:** b) -2,147,483,648 to 2,147,483,647

**8.**Which data type is used to store **true** or **false** values in C#?  
a) int  
b) bool  
c) string  
d) char  
**Answer:** b) bool

**9.**Which of these steps comes **before writing the first C# code**?  
a) Playing games  
b) Installing .NET SDK and setting up an IDE  
c) Writing a book  
d) Watching a movie  
**Answer:** b) Installing .NET SDK and setting up an IDE

**10.**Which primitive type is used to store **a single character** in C#?  
a) char  
b) string  
c) bool  
d) double  
**Answer:** a) char

**Section 3: Understanding Data and Operators**

**1.**Which of these is an **integral data type** in C#?  
a) double  
b) int  
c) float  
d) decimal  
**Answer:** b) int

**2.**Which integral type can store the largest range of whole numbers in C#?  
a) byte  
b) int  
c) long  
d) short  
**Answer:** c) long

**3.**Which data type is used to store **a single character**?  
a) string  
b) char  
c) text  
d) letter  
**Answer:** b) char

**4.**What is the main difference between **char** and **string** in C#?  
a) char holds one character, string holds multiple characters  
b) char can hold multiple words, string cannot  
c) string is only for numbers, char is for text  
d) char is always bigger than string  
**Answer:** a) char holds one character, string holds multiple characters

**5.**What is **type casting** in C#?  
a) Converting data from one type to another  
b) Copying text into a program  
c) Removing variables from memory  
d) Printing output to the console  
**Answer:** a) Converting data from one type to another

**6.**Which method is commonly used to **combine two strings** in C#?  
a) Multiply  
b) Concatenation  
c) Division  
d) Casting  
**Answer:** b) Concatenation

**7.**Which of the following is an **operator** in C#?  
a) +  
b) and  
c) combine  
d) join  
**Answer:** a) +

**8.**Which operator is used to **find the remainder** of a division in C#?  
a) /  
b) %  
c) \*  
d) -  
**Answer:** b) %

**9.**If int a = 10 and int b = 3, what will a / b return in C#?  
a) 3.3333  
b) 3  
c) 0  
d) 10  
**Answer:** b) 3

**10.**Which arithmetic operator is used for **multiplication** in C#?  
a) ×  
b) \*  
c) x  
d) mult  
**Answer:** b) \*

**Section 4: Decision Making and Loops**

**1.**Which statement is used in C# to make decisions based on a condition?  
a) for  
b) if-else  
c) loop  
d) return  
**Answer:** b) if-else

**2.**What is an **if-else ladder** used for?  
a) Comparing only two conditions  
b) Checking multiple conditions in sequence  
c) Repeating a block of code  
d) Storing variables  
**Answer:** b) Checking multiple conditions in sequence

**3.**What does a **nested if-else** statement mean?  
a) Multiple if-else statements inside each other  
b) Using if without else  
c) Writing if statements without conditions  
d) Combining if with loops  
**Answer:** a) Multiple if-else statements inside each other

**4.**Which statement is used as an alternative to multiple if-else checks for fixed values?  
a) for loop  
b) switch  
c) while loop  
d) return  
**Answer:** b) switch

**5.**Which keyword is used to define a **default case** in a C# switch statement?  
a) other  
b) else  
c) default  
d) break  
**Answer:** c) default

**6.**Which loop is best when you **know in advance** how many times the code should run?  
a) while  
b) do-while  
c) for  
d) if-else  
**Answer:** c) for

**7.**In a **while loop**, when is the condition checked?  
a) Before running the loop body  
b) After running the loop body  
c) Only at the end of the program  
d) Every two iterations  
**Answer:** a) Before running the loop body

**8.**Which loop will **always run at least once**, even if the condition is false?  
a) while  
b) for  
c) do-while  
d) nested loop  
**Answer:** c) do-while

**9.**What is a **nested loop**?  
a) A loop inside another loop  
b) Two loops running side by side  
c) A loop without a condition  
d) A loop that runs only once  
**Answer:** a) A loop inside another loop

**10.**Which keyword is used to **exit a loop early** in C#?  
a) stop  
b) end  
c) break  
d) exit  
**Answer:** c) break

**Section 5: Methods, Exception Handling & Debugging**

**1.**What is a **method** in C#?  
a) A loop that repeats tasks  
b) A block of code that performs a specific task  
c) A type of variable  
d) A keyword for printing output  
**Answer:** b) A block of code that performs a specific task

**2.**What is the purpose of a **return statement** in a method?  
a) To stop the program completely  
b) To send a value back to the caller of the method  
c) To print text to the screen  
d) To create a loop inside the method  
**Answer:** b) To send a value back to the caller of the method

**3.**What is **method overloading**?  
a) Using too many variables in a method  
b) Having multiple methods with the same name but different parameters  
c) Calling a method inside itself  
d) Running a method many times in a loop  
**Answer:** b) Having multiple methods with the same name but different parameters

**4.**Which keyword is used to handle exceptions in C#?  
a) try  
b) handle  
c) error  
d) throw  
**Answer:** a) try

**5.**Which block of code is used to handle the exception after a **try** block?  
a) finally  
b) catch  
c) break  
d) return  
**Answer:** b) catch

**6.**What does the **finally** block do in exception handling?  
a) Executes only if an error occurs  
b) Executes whether an error occurs or not  
c) Skips code after try block  
d) Deletes error logs  
**Answer:** b) Executes whether an error occurs or not

**7.**Which tool or process is used to find and fix errors in a program?  
a) Debugging  
b) Compiling  
c) Returning  
d) Casting  
**Answer:** a) Debugging

**8.**When debugging in Visual Studio, which key is often used to run the program step-by-step?  
a) F1  
b) F5  
c) F8  
d) F10  
**Answer:** d) F10

**9.**Which keyword in C# is used to **throw** an exception manually?  
a) error  
b) throw  
c) raise  
d) send  
**Answer:** b) throw

**10.**Why is exception handling important?  
a) It makes the program run faster  
b) It helps prevent program crashes by managing errors  
c) It hides all output from the user  
d) It replaces the need for testing  
**Answer:** b) It helps prevent program crashes by managing errors

**Section 6: Object-Oriented Programming Essentials**

**1.**Which statement about **classes and objects** in C# is correct?  
a) A class is an actual entity in memory, while an object is just a blueprint  
b) A class is a blueprint, and an object is an instance created from that blueprint  
c) Both classes and objects are the same  
d) An object can exist without a class  
**Answer:** b) A class is a blueprint, and an object is an instance created from that blueprint

**2.**Which of the following best describes a **field** in a class?  
a) A method inside a class  
b) A variable declared inside a class to store data  
c) A special type of property  
d) A block of code that runs automatically  
**Answer:** b) A variable declared inside a class to store data

**3.**What is the main purpose of **properties** in C#?  
a) To store data directly in memory without restrictions  
b) To provide controlled access to fields  
c) To create new objects  
d) To define constructors  
**Answer:** b) To provide controlled access to fields

**4.**When is a **constructor** in C# called?  
a) Manually by the programmer  
b) Automatically when an object is created  
c) Only when the program ends  
d) Only when a method is called  
**Answer:** b) Automatically when an object is created

**5.**What is a **parameterized constructor**?  
a) A constructor without any parameters  
b) A constructor that accepts arguments to set initial values of fields or properties  
c) A constructor that only creates multiple objects  
d) A constructor that runs multiple times  
**Answer:** b) A constructor that accepts arguments to set initial values of fields or properties

**6.**Which **access modifier** makes a class member available **only inside the same class**?  
a) public  
b) protected  
c) private  
d) internal  
**Answer:** c) private

**7.**What is the purpose of **encapsulation** in OOP?  
a) To combine multiple programs into one  
b) To hide the internal details of a class and only expose necessary parts  
c) To allow global access to all data  
d) To speed up program execution  
**Answer:** b) To hide the internal details of a class and only expose necessary parts

**8.**Which access modifier allows access to a member from **anywhere in the same assembly** but not from other assemblies?  
a) private  
b) internal  
c) protected  
d) public  
**Answer:** b) internal

**9.**If a field in a class is marked as **private**, how can it be accessed outside the class?  
a) By using a property or method that exposes it  
b) By changing it to public at runtime  
c) By creating a new class  
d) By importing a namespace  
**Answer:** a) By using a property or method that exposes it

**10.**What happens if you **do not define a constructor** in a class?  
a) The class cannot create objects  
b) C# automatically provides a default parameterless constructor  
c) The program will throw an error  
d) The class becomes abstract  
**Answer:** b) C# automatically provides a default parameterless constructor