**1. What is the primary purpose of regular expressions in C#?**

A) To store large amounts of data  
B) To define patterns for string matching and manipulation  
C) To improve execution speed of C# programs  
D) To handle file input and output

**Answer:** B) To define patterns for string matching and manipulation

**2. Which class in C# provides support for regular expressions?**

A) System.Text.RegularExpressions.Regex  
B) System.RegularExpressions.Pattern  
C) System.String.Regex  
D) System.RegexPatterns

**Answer:** A) System.Text.RegularExpressions.Regex

**3. What does the \d escape character represent in a regular expression?**

A) Any letter character  
B) Any whitespace character  
C) Any digit (0-9)  
D) Any special symbol

**Answer:** C) Any digit (0-9)

**4. Which of the following regular expression patterns will match a string that starts with "C#" and is followed by any number of characters?**

A) C#.\*  
B) C#?  
C) C#\d+  
D) C#^

**Answer:** A) C#.\*

**5. What is the purpose of the + quantifier in a regular expression?**

A) Matches zero or more occurrences of the preceding element  
B) Matches exactly one occurrence of the preceding element  
C) Matches one or more occurrences of the preceding element  
D) Matches zero or one occurrence of the preceding element

**Answer:** C) Matches one or more occurrences of the preceding element

**6. Which regex pattern would match a valid email address?**

A) [a-z]+@[a-z]+\.[a-z]+  
B) \d+@\w+\.\d+  
C) .\*@.\*  
D) [0-9]+[A-Z]+@[a-z]+

**Answer:** A) [a-z]+@[a-z]+\.[a-z]+

**7. What does \s match in a regular expression?**

A) A single space character  
B) Any whitespace character (space, tab, newline)  
C) A special character  
D) A sequence of numbers

**Answer:** B) Any whitespace character (space, tab, newline)

**8. What will the regular expression \bC#\b match?**

A) Any occurrence of "C#" in a string  
B) "C#" only when it appears at the start of a string  
C) "C#" as a whole word, not part of another word  
D) "C#" followed by a number

**Answer:** C) "C#" as a whole word, not part of another word

**9. What does the ^ character do in a regular expression?**

A) Matches the end of a string  
B) Matches the start of a string  
C) Negates a character class  
D) Escapes a special character

**Answer:** B) Matches the start of a string

**10. How can you check if a string matches a regex pattern in C#?**

A) Regex.Match(input, pattern)  
B) Regex.Check(input, pattern)  
C) Regex.IsMatch(input, pattern)  
D) Regex.Validate(input, pattern)

**Answer:** C) Regex.IsMatch(input, pattern)