**1. What is operator overloading in C#?**

a) Using an operator in a loop  
b) Defining new operators in C#  
c) Redefining the functionality of existing operators for user-defined types  
d) Overloading functions with different parameter types  
**Answer:** c) Redefining the functionality of existing operators for user-defined types

**2. Which keyword is used to overload an operator in C#?**

a) override  
b) operator  
c) overload  
d) op  
**Answer:** b) operator

**3. What is required for operator overloading to work?**

a) The operator must be defined inside a class or struct  
b) The operator must be a static method  
c) The operator must take at least one user-defined type as a parameter  
d) All of the above  
**Answer:** d) All of the above

**4. Which of the following operators cannot be overloaded?**

a) +  
b) -  
c) &&  
d) \*  
**Answer:** c) &&

**5. In the given code snippet, which operator is overloaded?**

public static Box operator+ (Box b, Box c)

{

Box box = new Box();

box.length = b.length + c.length;

box.breadth = b.breadth + c.breadth;

box.height = b.height + c.height;

return box;

}

a) +  
b) -  
c) \*  
d) ==  
**Answer:** a) +

**6. Which of the following statements about operator overloading is correct?**

a) Operator overloading changes the precedence of operators  
b) Operator overloading can only be applied to built-in types  
c) Operator overloading allows user-defined types to behave like built-in types  
d) Operator overloading is automatically enabled for all classes  
**Answer:** c) Operator overloading allows user-defined types to behave like built-in types

**7. What does the following overloaded == operator do?**

public static bool operator == (Box lhs, Box rhs)

{

return (lhs.length == rhs.length && lhs.height == rhs.height && lhs.breadth == rhs.breadth);

}

a) Checks if two Box objects have the same memory reference  
b) Checks if two Box objects have identical dimensions  
c) Assigns one Box object to another  
d) Compares two Box objects using their hash codes  
**Answer:** b) Checks if two Box objects have identical dimensions

**8. Which of the following operator types can be overloaded?**

a) Unary operators  
b) Binary operators  
c) Comparison operators  
d) All of the above  
**Answer:** d) All of the above

**9. What happens when you overload an operator in C#?**

a) The existing functionality of the operator is permanently changed  
b) A new function is created that defines how the operator works for a specific user-defined type  
c) The operator becomes available for all data types  
d) The operator must be used within a derived class only  
**Answer:** b) A new function is created that defines how the operator works for a specific user-defined type

**10. What is the return type of an overloaded + operator for a Box class?**

a) void  
b) Box  
c) int  
d) bool  
**Answer:** b) Box