Java Operator-Based Programming Questions (No if/else)

# 1. Check if a number is between 10 and 20

int a = 15;  
boolean result = a >= 10 && a <= 20;  
System.out.println(result); // true

# 2. Check if a number is not divisible by both 2 and 3

int a = 7;  
boolean result = !(a % 2 == 0 || a % 3 == 0);  
System.out.println(result); // true

# 3. Print whether number is even using ternary operator only

int num = 6;  
String output = (num % 2 == 0) ? "Even" : "Odd";  
System.out.println(output); // Even

# 4. Find greater of two numbers using only ? : operator

int a = 10, b = 20;  
int max = (a > b) ? a : b;  
System.out.println("Max = " + max); // Max = 20

# 5. Check if two numbers are equal using logical and arithmetic operators

int a = 5, b = 5;  
boolean result = (a - b == 0) && (b - a == 0);  
System.out.println(result); // true

# 6. Increment if even, else decrement (using ++, --, ternary)

int x = 6;  
x = (x % 2 == 0) ? ++x : --x;  
System.out.println(x); // 7

# 7. Check if number is a 3-digit number using logical operators

int num = 123;  
boolean is3Digit = num >= 100 && num <= 999;  
System.out.println(is3Digit); // true

# 8. Combine multiple conditions with && and ||

int age = 20, marks = 85;  
boolean result = (age > 18 && age < 25) || marks > 90;  
System.out.println(result); // true

# 9. Swap two numbers without using temp or if/else

int a = 5, b = 3;  
a = a + b;  
b = a - b;  
a = a - b;  
System.out.println("a = " + a + ", b = " + b); // a = 3, b = 5

# 10. Check if a number is multiple of both 3 and 5

int num = 15;  
boolean result = (num % 3 == 0) && (num % 5 == 0);  
System.out.println(result); // true