C++ Exam: Advanced Operator Usage (40 Exercises)

Instructions

- Predict the output of each code snippet.
- Write your answers clearly and concisely.
- Each question is worth 2.5 points.
- The total points for the exam are 100.

Exercises

1. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 5, b = 3;
    cout << (a << b) << endl;
    return 0;
}
```

2. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
```

```
    int a = 16, b = 2;
    cout << (a >> b) << endl;
    return 0;
}
```

3. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 7, b = 4;
    cout << (a & b) << endl;
    return 0;
}
```

4. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 7, b = 4;
    cout << (a | b) << endl;
    return 0;
}
```

5. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 7, b = 4;
    cout << (a ^ b) << endl;
    return 0;
}
```

6. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 7;
    cout << (~a) << endl;
    return 0;
}
```

7. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a == b) << endl;
    return 0;
}
```

8. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a != b) << endl;
    return 0;
}
```

9. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a > b) << endl;
    return 0;
}
```

10. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a < b) << endl;
    return 0;
}
```

11. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a >= b) << endl;
    return 0;
}
```

12. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a <= b) << endl;
    return 0;
}
```

13. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5, c = 15;
    cout << (a > b && b < c) << endl;
    return 0;
}
```

14. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5, c = 15;
    cout << (a > b || b > c) << endl;
    return 0;
}
```

15. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5, c = 15;
    cout << !(a > b) << endl;
    return 0;
}
```

16. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a << 1 | b >> 1) << endl;
    return 0;
}
```

17. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a & b | a ^ b) << endl;
    return 0;
}
```

18. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a << 2 & b >> 1) << endl;
    return 0;
}
```

19. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a | b & a ^ b) << endl;
    return 0;
}
```

20. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a >> 1 | b << 1) << endl;
    return 0;
}
```

21. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a & b << 1) << endl;
    return 0;
}
```

22. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a | b >> 1) << endl;
    return 0;
}
```

23. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a ^ b << 1) << endl;
    return 0;
}
```

24. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a & b | a << 1) << endl;
    return 0;
}
```

25. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a | b & a >> 1) << endl;
    return 0;
}
```

26. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a ^ b | a << 1) << endl;
    return 0;
}
```

27. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a & b ^ a >> 1) << endl;
    return 0;
}
```

28. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a | b ^ a << 1) << endl;
    return 0;
}
```

29. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a ^ b & a >> 1) << endl;
    return 0;
}
```

30. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a & b | a ^ b << 1) << endl;
    return 0;
}
```

31. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a | b & a ^ b >> 1) << endl;
    return 0;
}
```

32. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a ^ b | a & b << 1) << endl;
    return 0;
}
```

33. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a & b ^ a | b >> 1) << endl;
    return 0;
}
```

34. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a | b ^ a & b << 1) << endl;
    return 0;
}
```

35. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a ^ b | a & b >> 1) << endl;
    return 0;
}
```

36. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a & b | a ^ b >> 1) << endl;
    return 0;
}
```

37. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a | b & a ^ b << 1) << endl;
    return 0;
}
```

38. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a ^ b & a | b >> 1) << endl;
    return 0;
}
```

39. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a & b ^ a | b << 1) << endl;
    return 0;
}
```

40. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a | b ^ a & b >> 1) << endl;
    return 0;
}
```

41. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int a = 10, b = 5;
    cout << (a ^ b | a & b << 1) << endl;
    return 0;
}
```

End of Exam