C++ Exam: Advanced Loops and Operators (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() {
    for (int i = 0; i < 5; i++) {
        cout << (i << 1) << " ";
    }
    return 0;
}
```

2. Predict the output of the following code:

```
#include <iostream>
using namespace std;
```

```
int main() {
    int i = 0;
    while (i < 5) {
        cout << (i >> 1) << " ";
        i++;
    }
    return 0;
}
```

3. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    for (int i = 1; i <= 5; i++) {
        cout << (i & 3) << " ";
    }
    return 0;
}
```

4. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int i = 0;
    do {
        cout << (i | 2) << " ";
        i++;
    } while (i < 5);
    return 0;
}
```

5. Predict the output of the following code:

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

```
    for (int i = 0; i < 5; i++) {
        cout << (i ^ 1) << " ";
    }
    return 0;
}
```

6. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int i = 0;
    while (i < 5) {
        cout << (~i) << " ";
        i++;
    }
    return 0;
}
```

7. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    for (int i = 0; i < 5; i++) {
        if (i & 1) cout << i << " ";
    }
    return 0;
}
```

8. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int i = 0;
    while (i < 5) {
        if (i | 2) cout << i << " ";
```

```
        i++;
    }
    return 0;
}
```

9. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    for (int i = 0; i < 5; i++) {
        if (i ^ 1) cout << i << " ";
    }
    return 0;
}
```

10. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int i = 0;
    do {
        if (~i) cout << i << " ";
        i++;
    } while (i < 5);
    return 0;
}
```

11. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    for (int i = 0; i < 5; i++) {
        cout << (i << 1 | i >> 1) << " ";
    }
    return 0;
}
```

12. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int i = 0;
    while (i < 5) {
        cout << (i & 1 | i ^ 1) << " ";
        i++;
    }
    return 0;
}
```

13. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    for (int i = 0; i < 5; i++) {
        cout << (i | 1 & i ^ 1) << " ";
    }
    return 0;
}
```

14. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int i = 0;
    do {
        cout << (i ^ 1 | i & 1) << " ";
        i++;
    } while (i < 5);
    return 0;
}
```

15. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    for (int i = 0; i < 5; i++) {
        cout << (i << 1 & i >> 1) << " ";
    }
    return 0;
}
```

16. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int i = 0;
    while (i < 5) {
        cout << (i | 1 ^ i & 1) << " ";
        i++;
    }
    return 0;
}
```

17. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    for (int i = 0; i < 5; i++) {
        cout << (i ^ 1 & i | 1) << " ";
    }
    return 0;
}
```

18. Predict the output of the following code:

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

```
    int i = 0;
    do {
        cout << (i & 1 ^ i | 1) << " ";
        i++;
    } while (i < 5);
    return 0;
}
```

19. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    for (int i = 0; i < 5; i++) {
        cout << (i << 1 ^ i >> 1) << " ";
    }
    return 0;
}
```

20. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int i = 0;
    while (i < 5) {
        cout << (i | 1 & i ^ 1) << " ";
        i++;
    }
    return 0;
}
```

21. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    for (int i = 0; i < 5; i++) {
```

```
        cout << (i ^ 1 | i & 1) << " ";
    }
    return 0;
}
```

22. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int i = 0;
    do {
        cout << (i & 1 | i ^ 1) << " ";
        i++;
    } while (i < 5);
    return 0;
}
```

23. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    for (int i = 0; i < 5; i++) {
        cout << (i << 1 | i >> 1) << " ";
    }
    return 0;
}
```

24. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int i = 0;
    while (i < 5) {
        cout << (i & 1 ^ i | 1) << " ";
        i++;
```

```
    }
    return 0;
}
```

25. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    for (int i = 0; i < 5; i++) {
        cout << (i | 1 ^ i & 1) << " ";
    }
    return 0;
}
```

26. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int i = 0;
    do {
        cout << (i ^ 1 & i | 1) << " ";
        i++;
    } while (i < 5);
    return 0;
}
```

27. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    for (int i = 0; i < 5; i++) {
        cout << (i << 1 & i >> 1) << " ";
    }
    return 0;
}
```

28. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int i = 0;
    while (i < 5) {
        cout << (i | 1 & i ^ 1) << " ";
        i++;
    }
    return 0;
}
```

29. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    for (int i = 0; i < 5; i++) {
        cout << (i ^ 1 | i & 1) << " ";
    }
    return 0;
}
```

30. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int i = 0;
    do {
        cout << (i & 1 | i ^ 1) << " ";
        i++;
    } while (i < 5);
    return 0;
}
```

31. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    for (int i = 0; i < 5; i++) {
        cout << (i << 1 ^ i >> 1) << " ";
    }
    return 0;
}
```

32. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int i = 0;
    while (i < 5) {
        cout << (i | 1 & i ^ 1) << " ";
        i++;
    }
    return 0;
}
```

33. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    for (int i = 0; i < 5; i++) {
        cout << (i ^ 1 | i & 1) << " ";
    }
    return 0;
}
```

34. Predict the output of the following code:

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

```
    int i = 0;
    do {
        cout << (i & 1 | i ^ 1) << " ";
        i++;
    } while (i < 5);
    return 0;
}
```

35. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    for (int i = 0; i < 5; i++) {
        cout << (i << 1 | i >> 1) << " ";
    }
    return 0;
}
```

36. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int i = 0;
    while (i < 5) {
        cout << (i & 1 ^ i | 1) << " ";
        i++;
    }
    return 0;
}
```

37. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    for (int i = 0; i < 5; i++) {
```

```
        cout << (i | 1 ^ i & 1) << " ";
    }
    return 0;
}
```

38. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int i = 0;
    do {
        cout << (i ^ 1 & i | 1) << " ";
        i++;
    } while (i < 5);
    return 0;
}
```

39. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    for (int i = 0; i < 5; i++) {
        cout << (i << 1 & i >> 1) << " ";
    }
    return 0;
}
```

40. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int i = 0;
    while (i < 5) {
        cout << (i | 1 & i ^ 1) << " ";
        i++;
```

```
    }
    return 0;
}
```

41. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    for (int i = 0; i < 5; i++) {
        cout << (i ^ 1 | i & 1) << " ";
    }
    return 0;
}
```

42. Predict the output of the following code:

```
#include <iostream>
using namespace std;
int main() {
    int i = 0;
    do {
        cout << (i & 1 | i ^ 1) << " ";
        i++;
    } while (i < 5);
    return 0;
}
```

End of Exam