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Dear [Recipient Name],

Subject: XNOR Gate Documentation

I hope this letter finds you well. I am writing to provide you with comprehensive documentation regarding the XNOR gate, a crucial component in digital electronics. The XNOR gate (exclusive-NOR) is a digital logic gate that outputs true or high only when both of its inputs are the same.

1. **\*\*Introduction\*\***

- Description of the XNOR gate and its significance in digital circuits.

2. **\*\*Symbol and Truth Table\*\***

- [Insert XNOR gate symbol]

- Truth Table:

Input A	Input B	Output (A XNOR B)
0	0	1
0	1	0
1	0	0
1	1	1

3. **\*\*Logical Expression\*\***

- Logical formula representation:  $A \text{ XNOR } B = (A \text{ AND } B) \text{ OR } (\text{NOT } A \text{ AND NOT } B)$

4. **\*\*Applications\*\***

- Explanation of typical uses in circuits such as parity checkers, equality detectors, and digital comparators.

5. **\*\*Conclusion\*\***

- Summary and importance of understanding the XNOR gate for practical applications in electronics.

Please feel free to reach out if you have any questions or require further clarification on the information provided. I look forward to your feedback.

Best regards,

[Your Name]  
[Your Title]  
[Your Company/Organization]