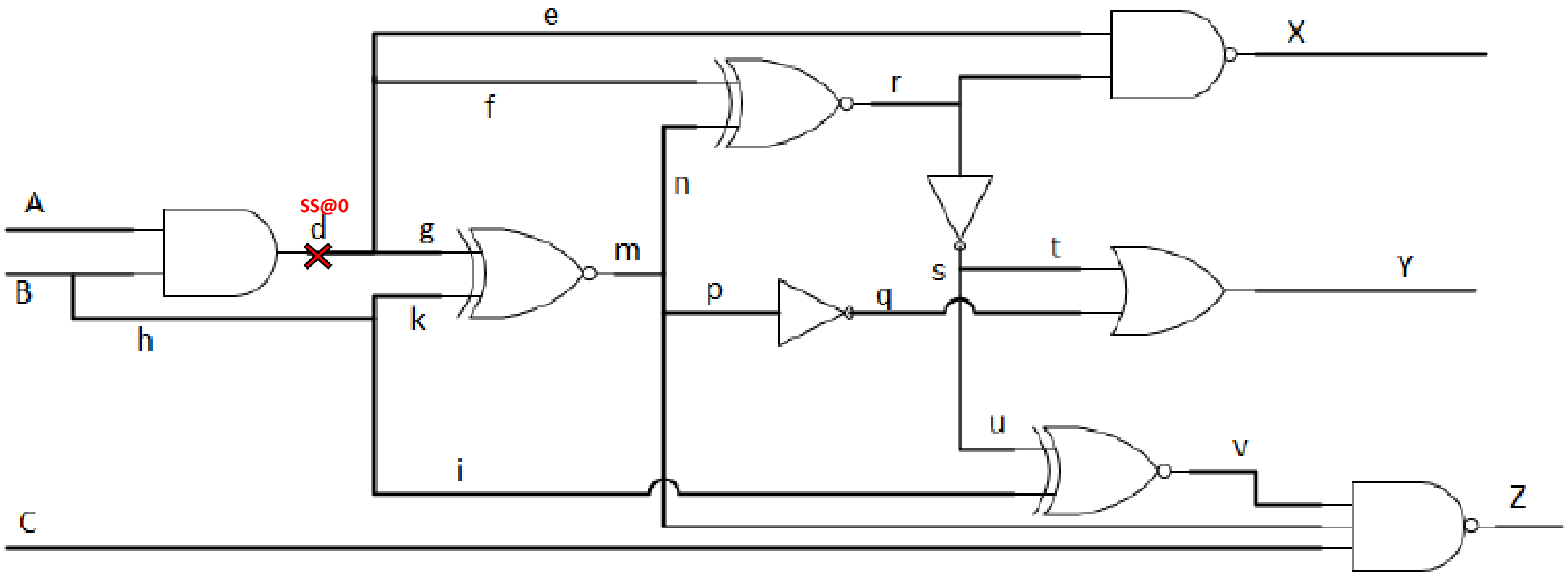
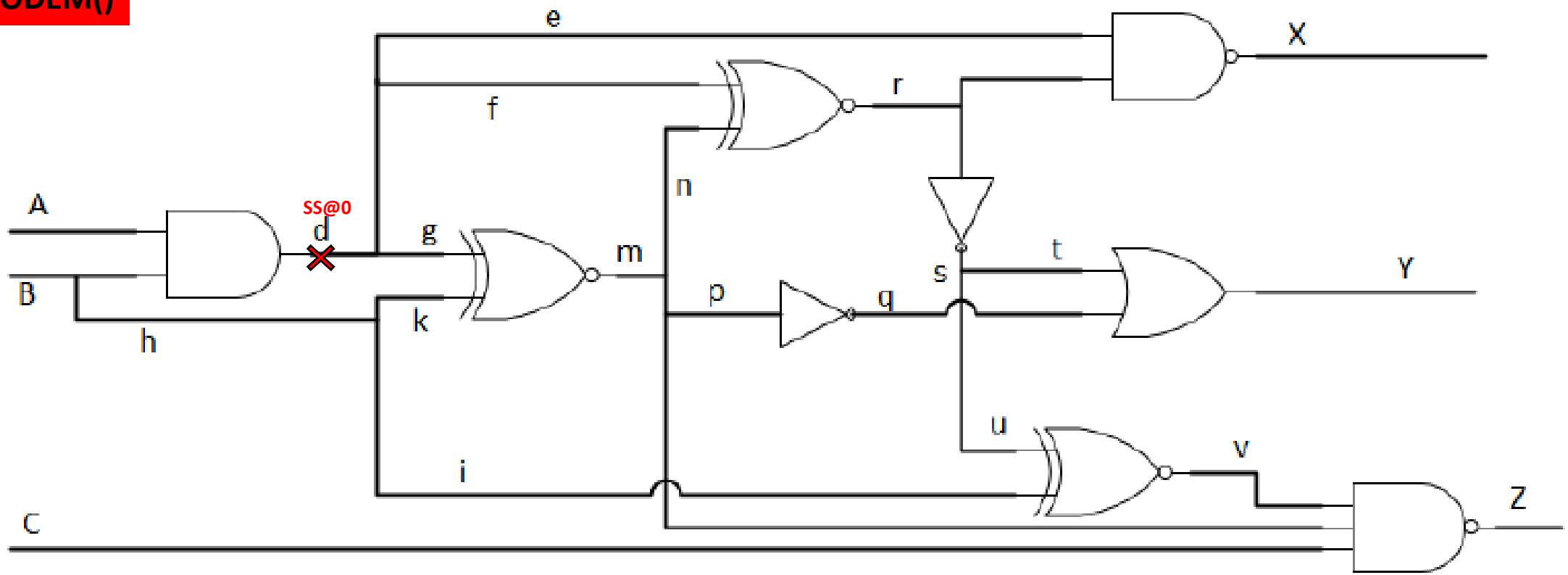



# PODEM
# d – SS@0

EE658 – Diagnosis and Design of Reliable Digital Systems
Professor Tabar
Fei Wu

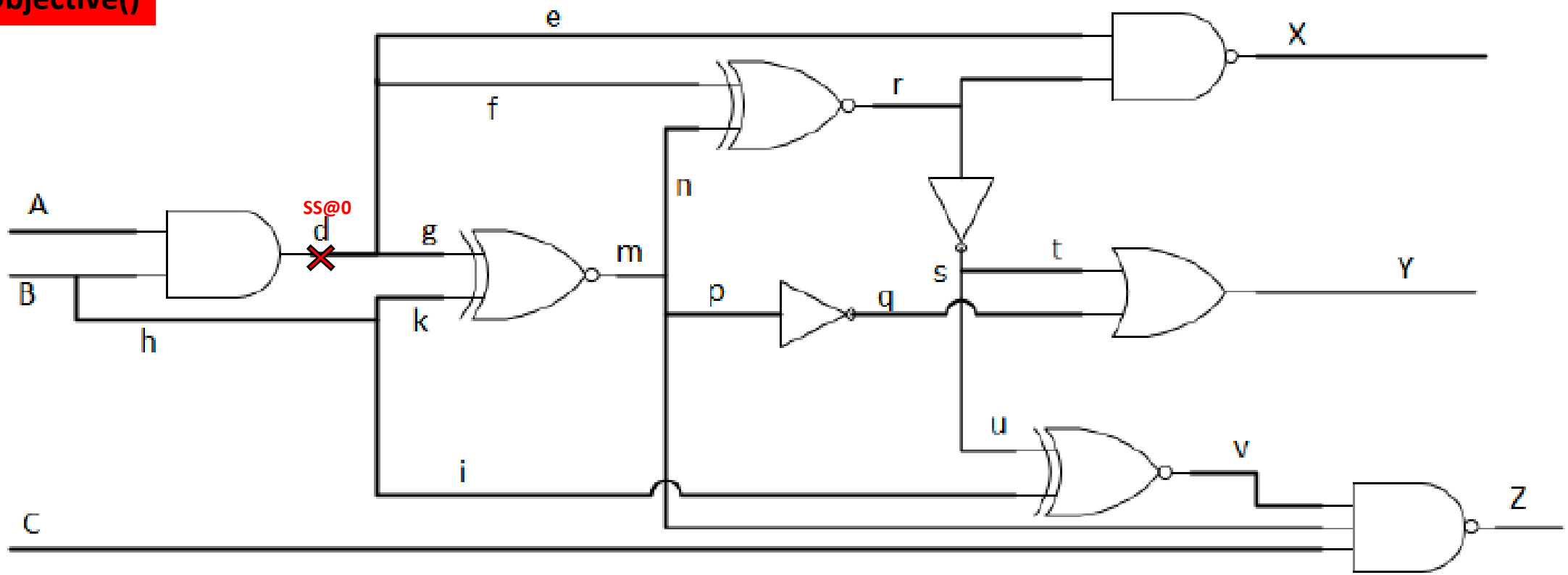
USC Viterbi School of Engineering

**PODEM()**




All initial values are considered X, including the faulty node.

**Objective()**




Fault: AND_d SS@0, current value of AND_d = X
Objective: {AND_d, 1}

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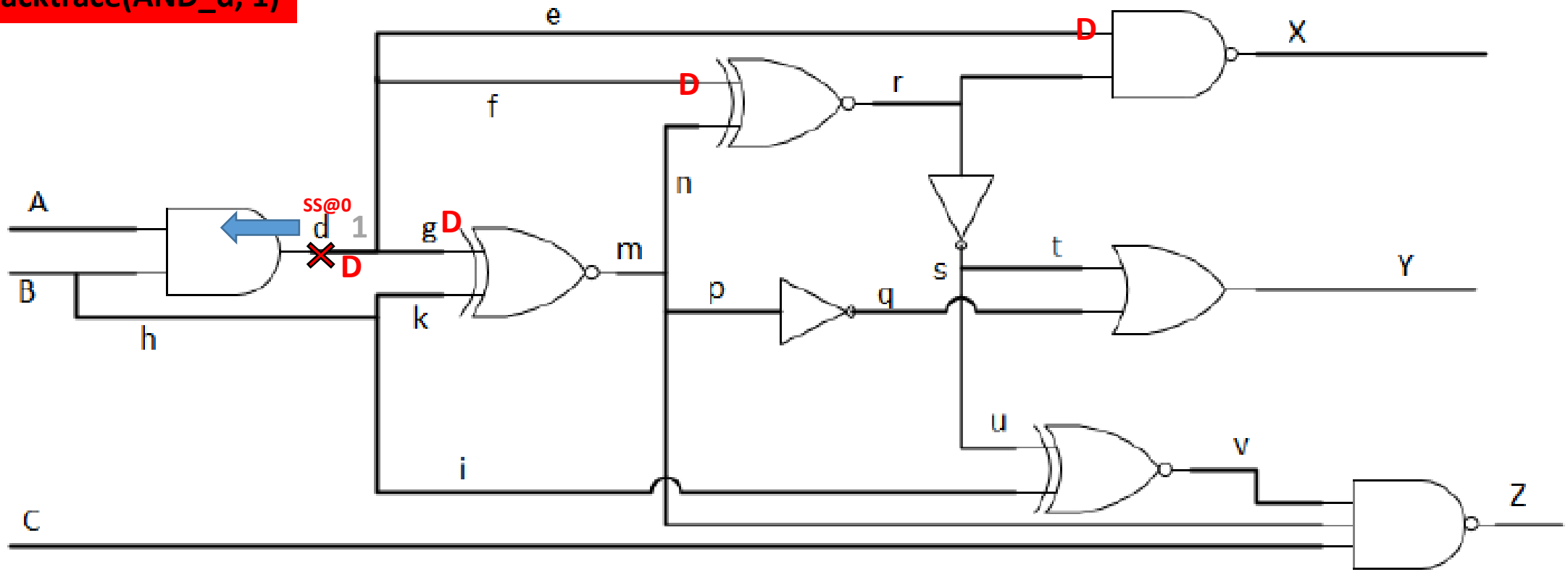
**Backtrace(AND_d, 1)**

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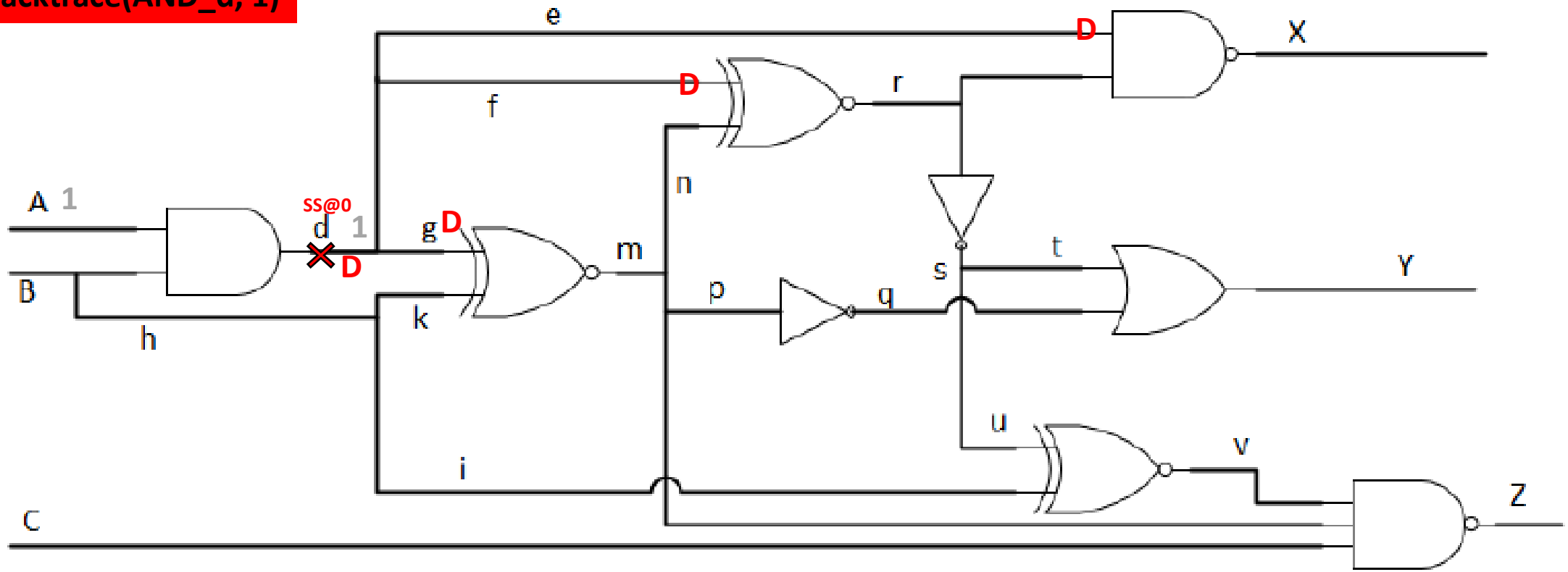
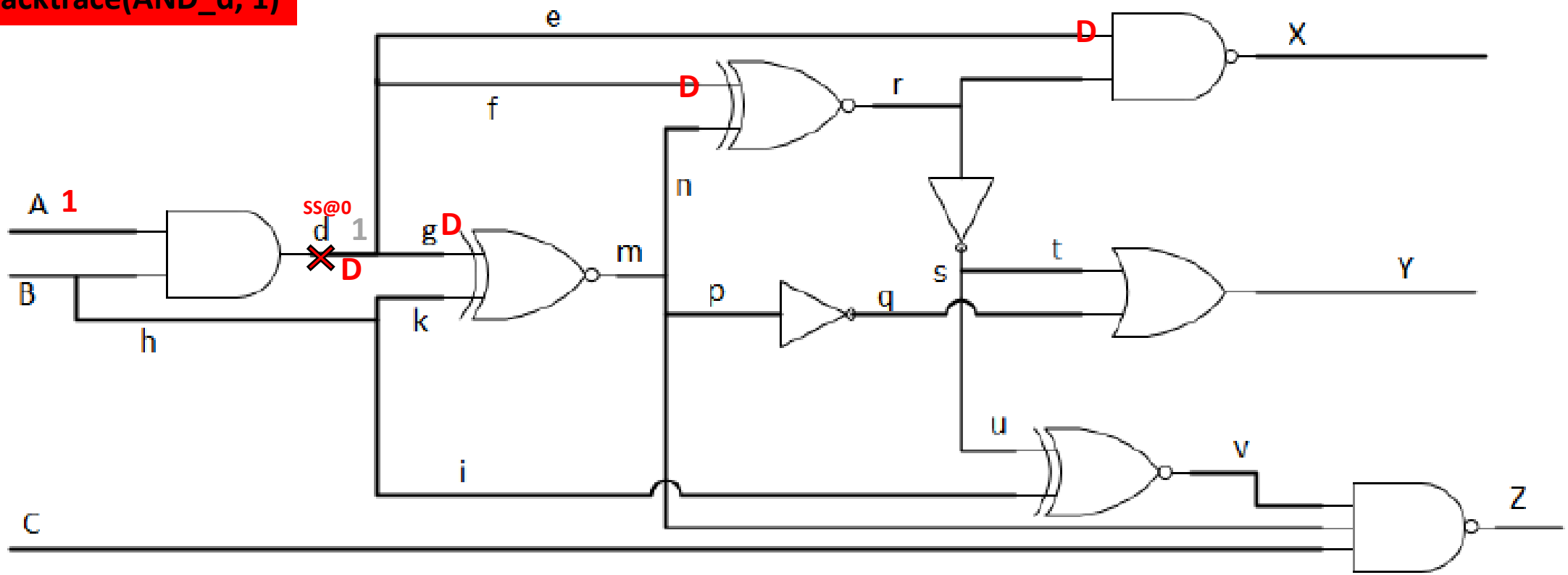
**Backtrace(AND_d, 1)**

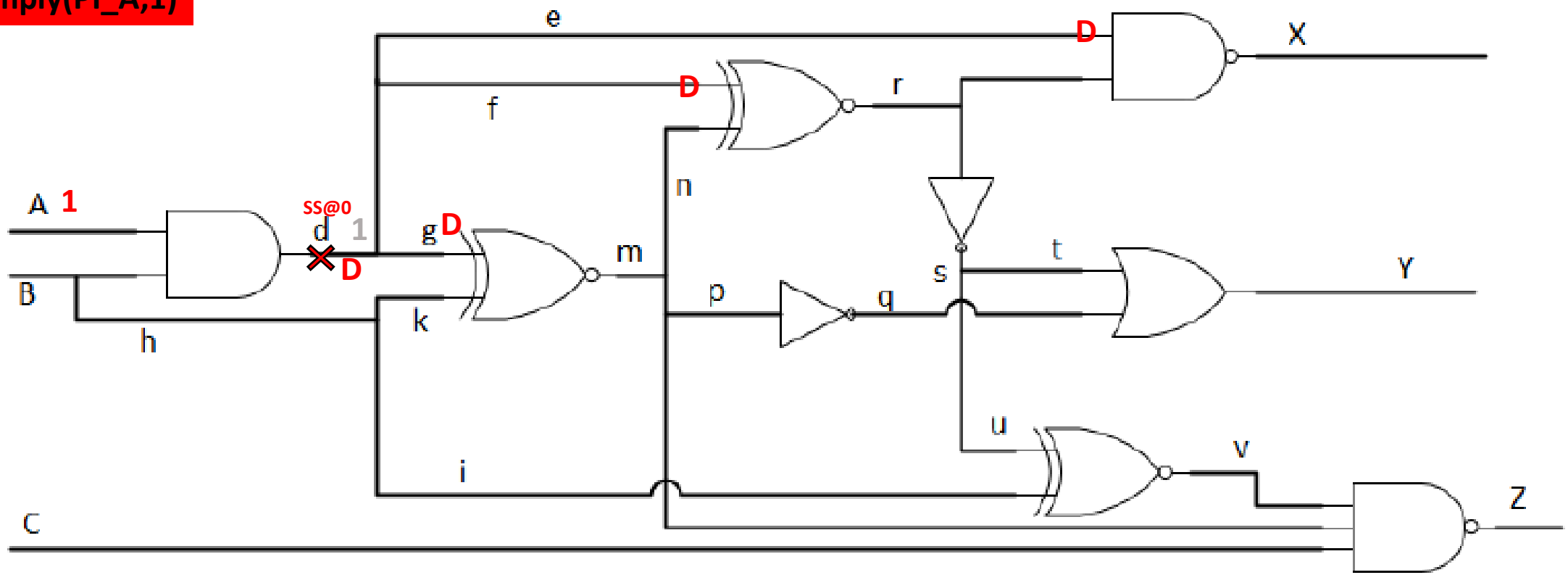


**Backtrace(AND_d, 1)**

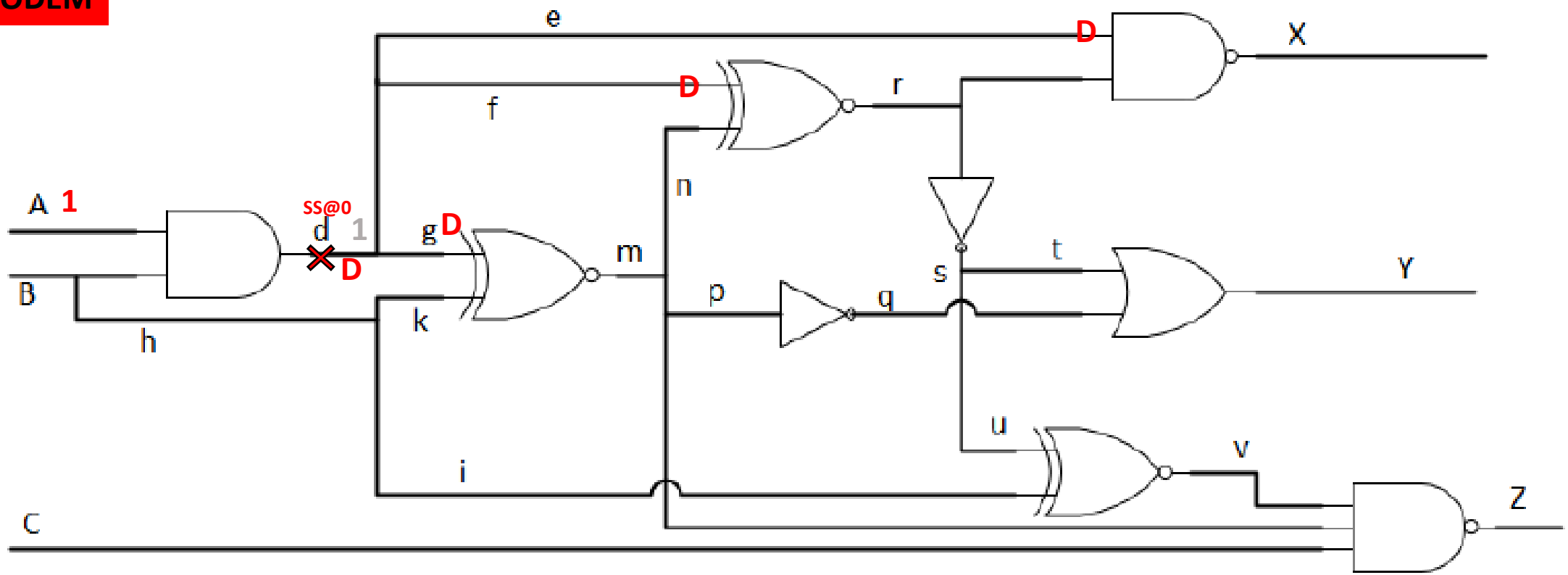



Note: PI can be considered as a gate in the algorithm.
A is PI, return (PI_A, 1)

**Imply(PI_A,1)**



**PODEM**




Error is not at the output
Test is possible(no conflicts)

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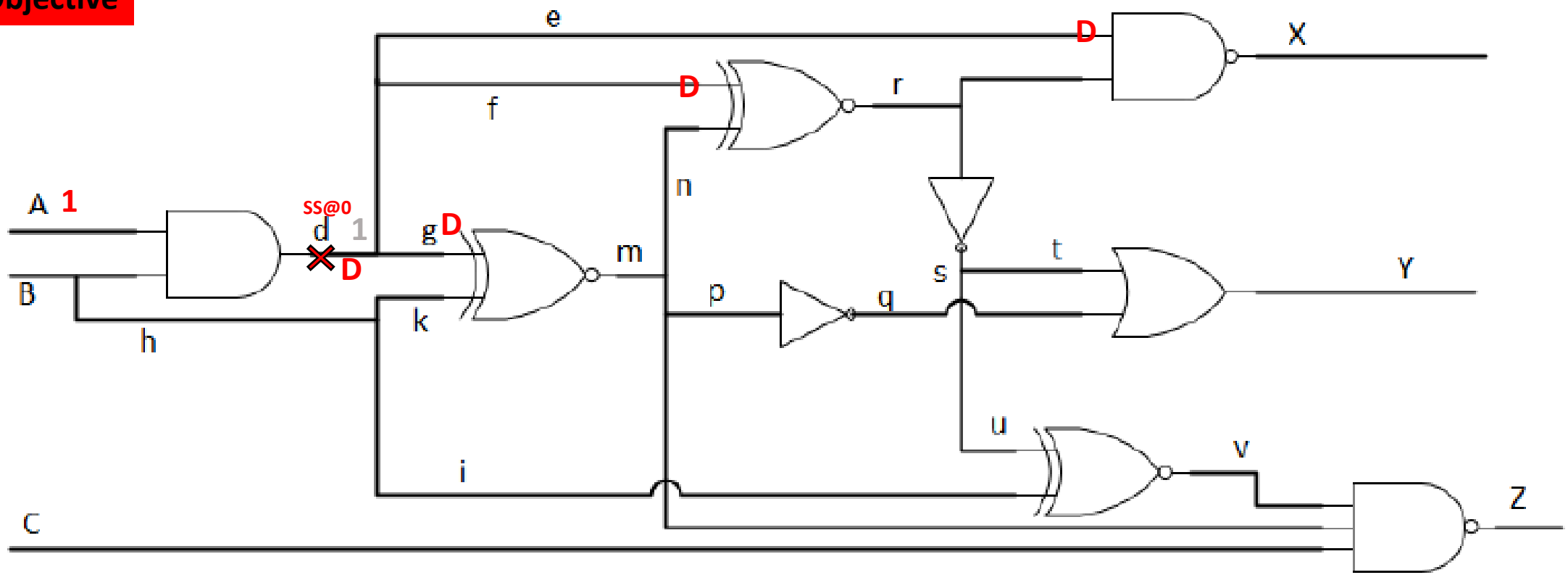
**Objective**




Error is not at the output
Test is possible(no conflicts)
D-frontier={NXOR_m,NAND_X, NXOR_r}
Objective={NXOR_m,1}

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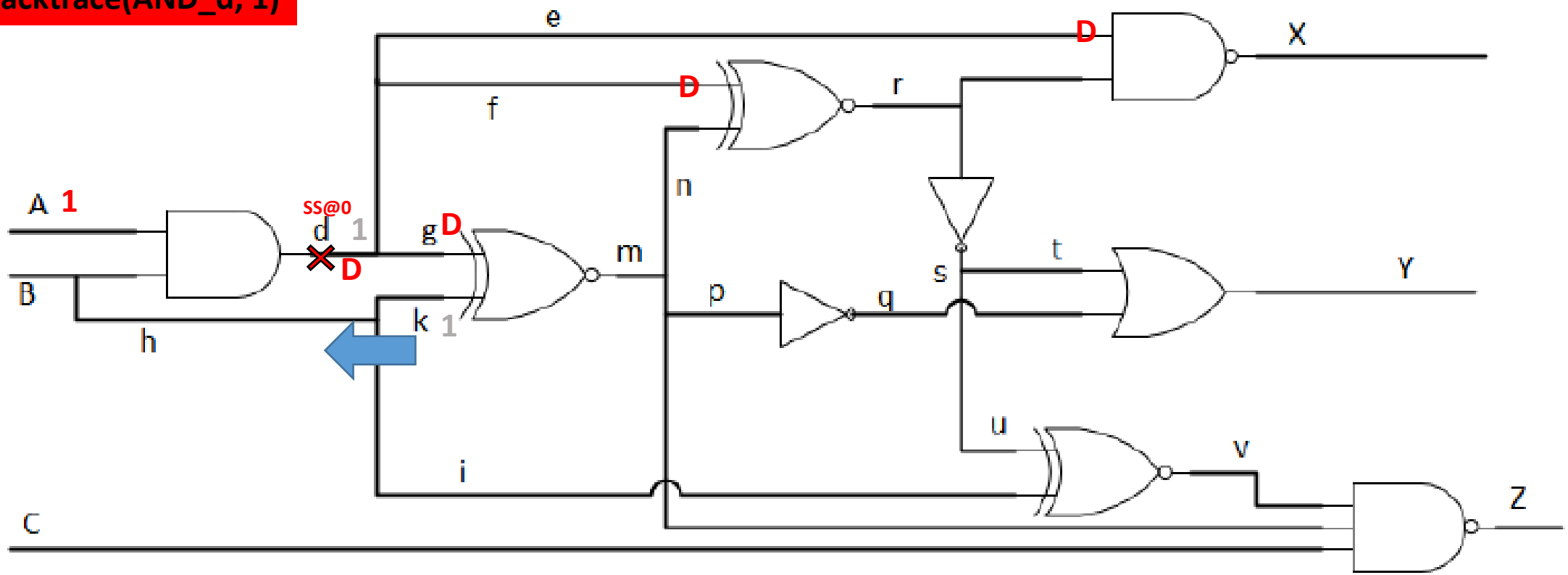
**Backtrace(AND_d, 1)**




Error is not at the output
Test is possible(no conflicts)
D-frontier={NXOR_m,NAND_X, NXOR_r}
Objective={NXOR_m,1}

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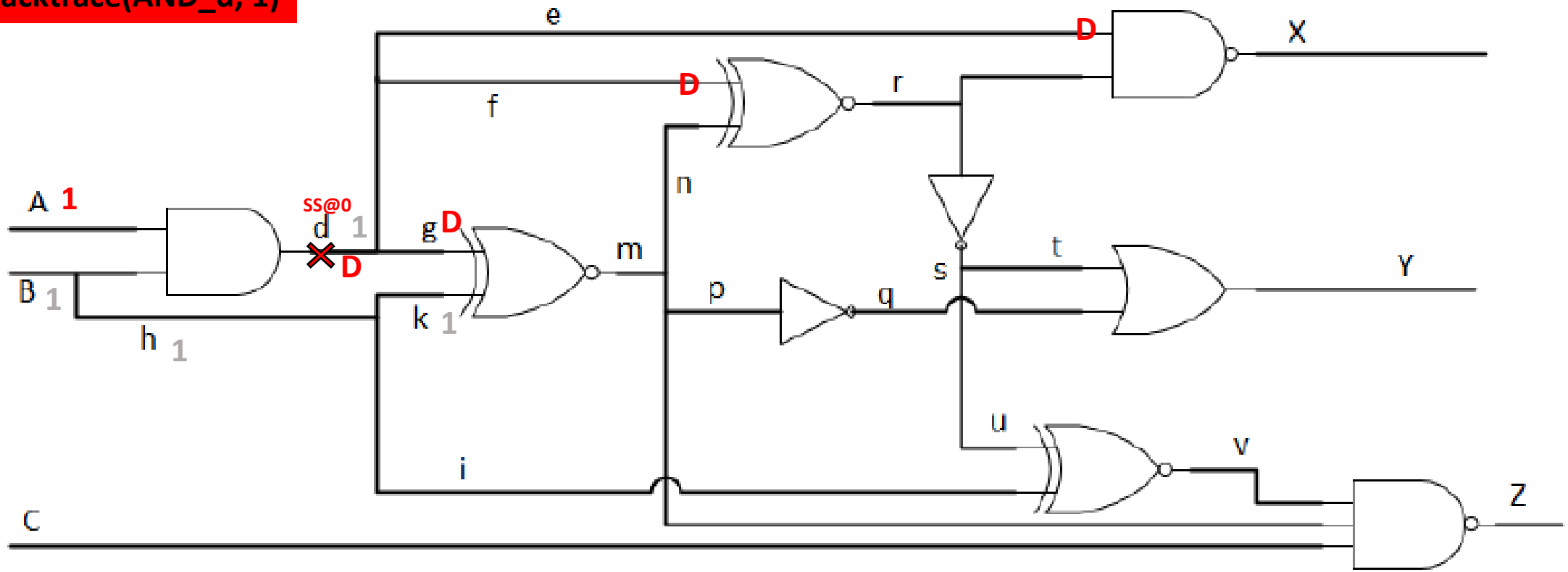
**Backtrace(AND_d, 1)**

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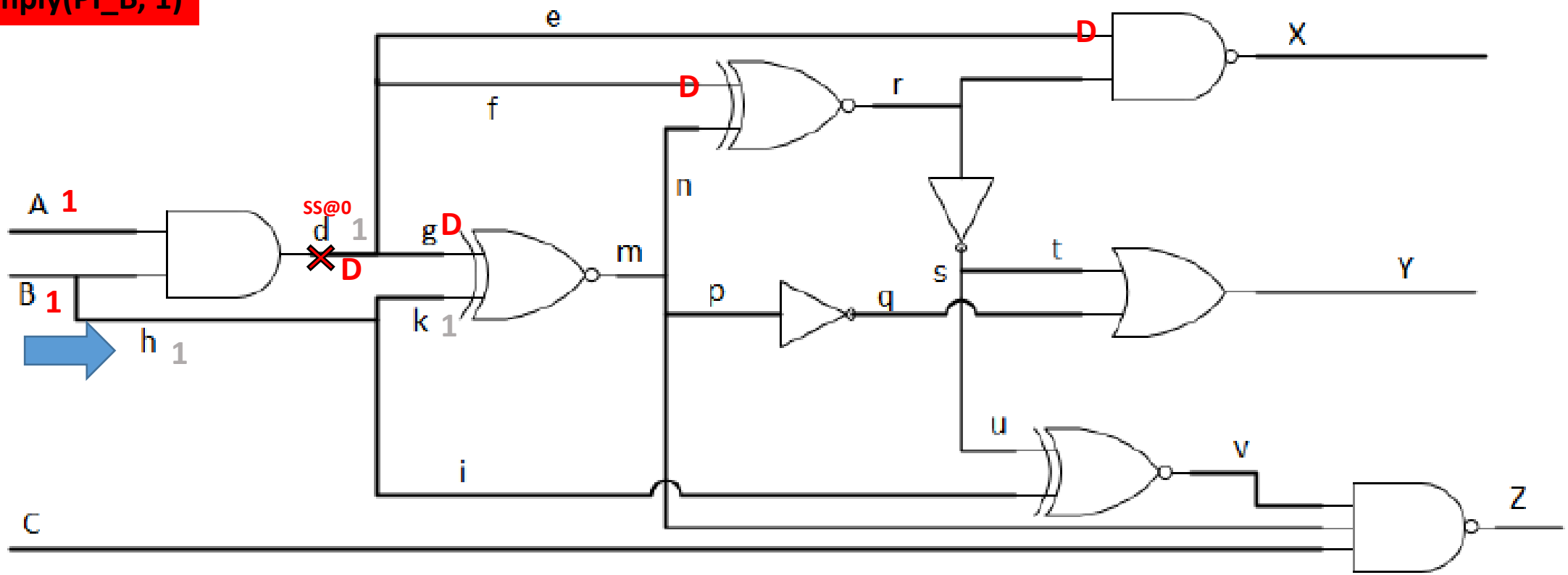
**Imply(PI_B, 1)**

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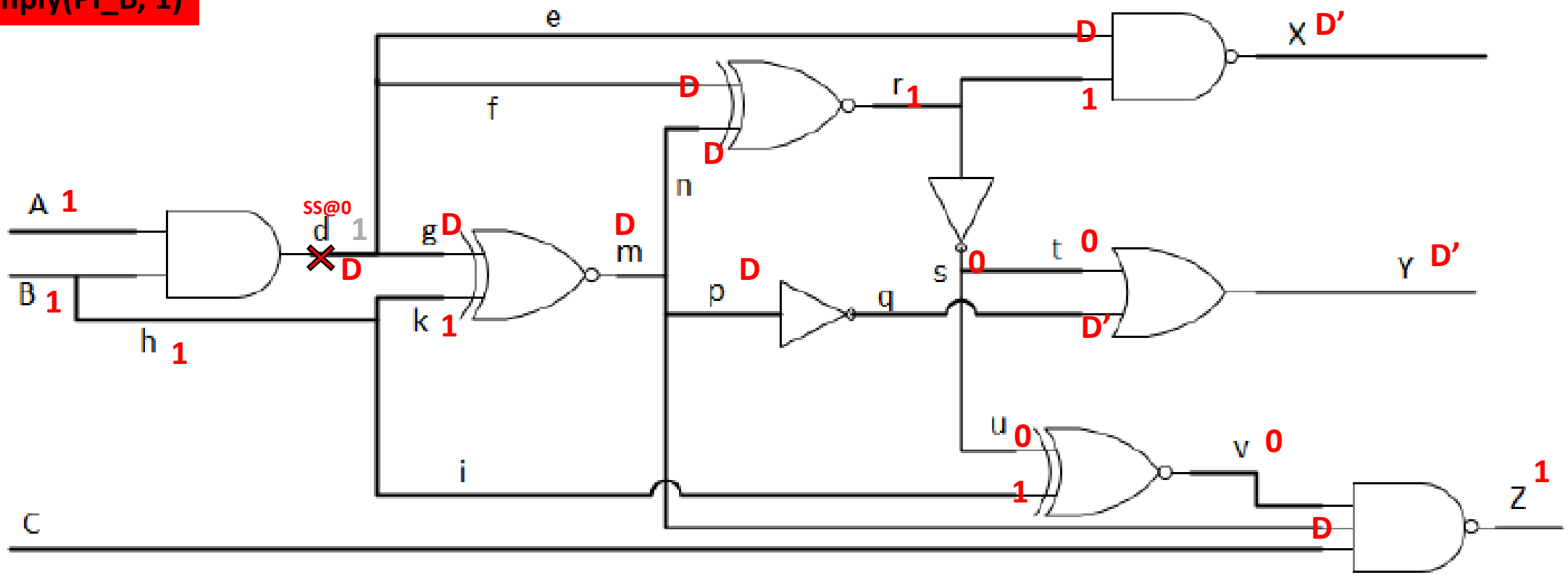
**Imply(PI_B, 1)**




Note: error is at the output

**SUCCESS**

**T = {1, 1, X}**

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