

CS653A: Introduction to VLSI Design

Homework #5

Deadline: Tuesday, December 29th, 2009

Consider four designs of a 6-input OR gate shown in Figure 1 below. Develop an expression for the delay of each path if the path electrical effort is H . Which design is the fastest for $H = 1$? For $H = 5$? For $H = 20$? Explain your conclusions in detail.

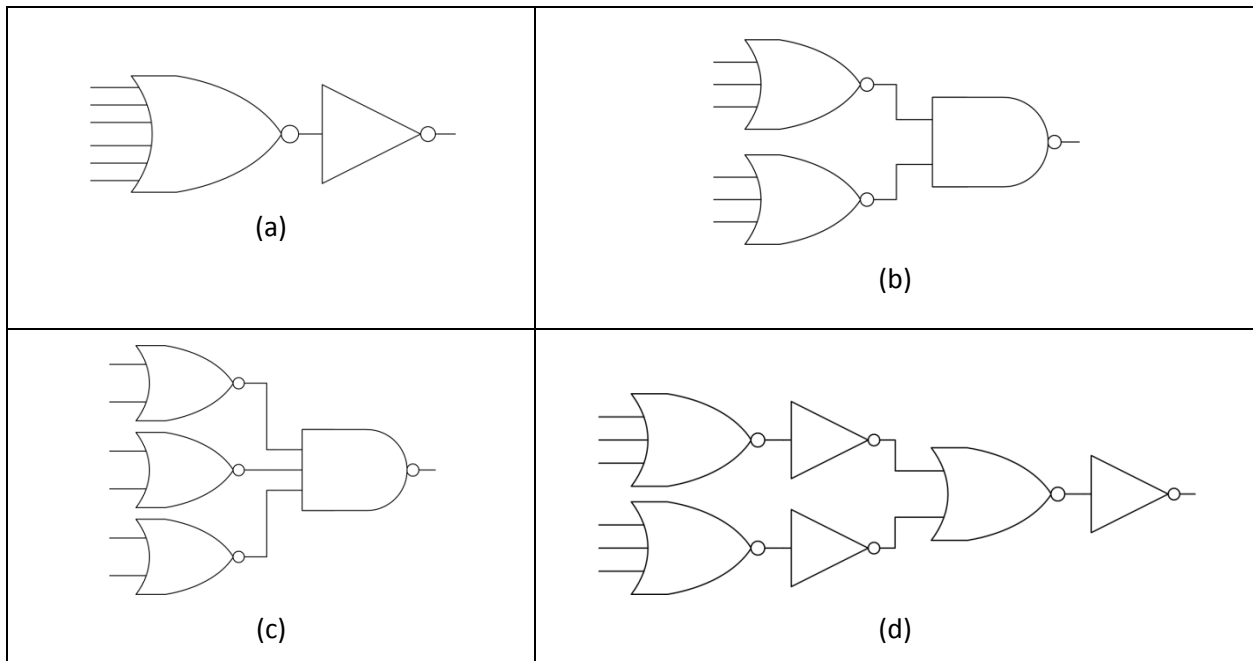


Figure 1. Four designs of a 6-input OR gate