Conditional Statement-Multiplexer-General Case: Quiz Solution   www.highlevel-synthesis.com
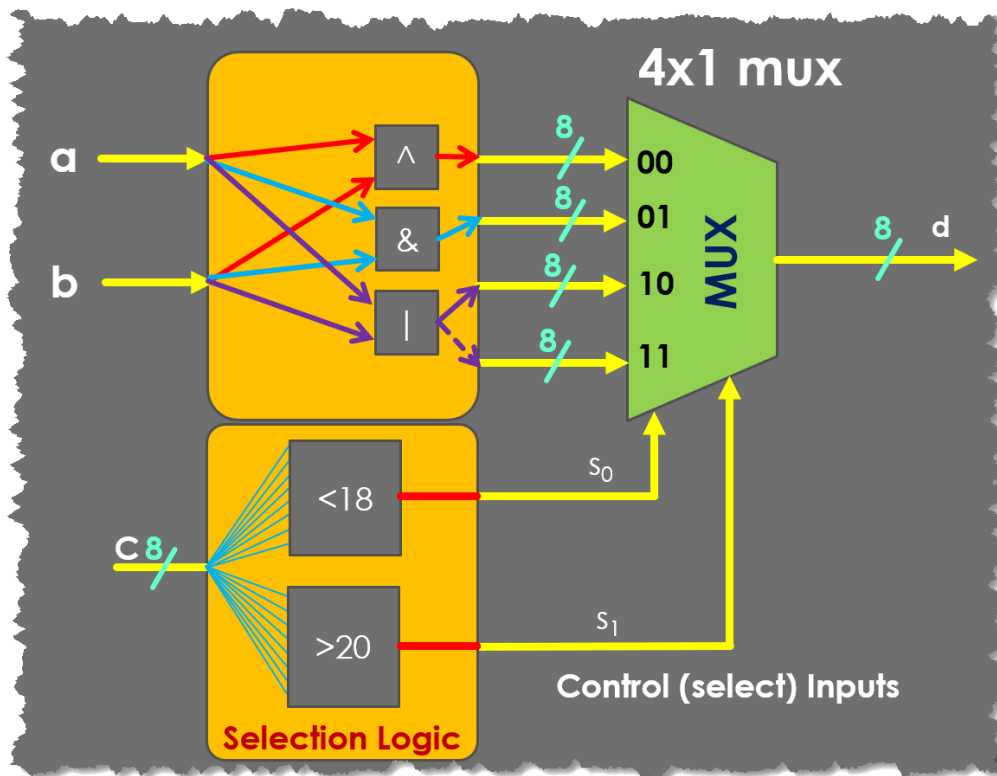
The following figure shows the circuit structure of the if-else statement in the quiz question.

If c is less than 18 then S0 = 1 and S1 = 0, or the select input is "01". Therefore, the $(a\&b)$ function is connected to the output.

If c is greater than 20 then S0 = 0 and S1 = 1, or the select input is "10". Therefore, the $(a|b)$ function is connected to the output.

Otherwise, S0 = 0 and S1 = 0 or the select input is "00". Therefore, the $(a\wedge b)$ function is connected to the output.