**NPTEL** NPTEL ONLINE COURSE Discrete Mathematics Logic AND operator for 3 Variables Prof. S.R.S Iyengar Department of Computer Science IIT Ropar

We saw that OR truth table of PQ and R. How will an AND truth table of three variables look like? So let's fill in the table. PQR 0,0,0 to 1,1,1 eight entries. So what you mean by AND? All of them should be true. 0, 0, 0 do you think all of them are true? No. All of them are not true. So 0. 0,0, 1. No. All of them are not true. If I spot even a single 0, I should say it is 0. So obviously every single entry will be 0 except for the last entry which is 1,1,1 which will give you 1. So P and Q and R will be all 0s, first seven entries will be 0 and the last one will be 1.

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