

Module 2: CMOS Characteristics

5. (i) Realize 3-input NAND and NOR gates using the CD 4007 IC. Verify the truth table and measure the rise and the fall times by switching the input between 000 and 111.

(ii) Identify a situation where we need to connect the outputs of several gates. The present step of the experiment pertains to such a situation.

Configure one inverter G_1 with '0' output and five inverters G_2, G_3, G_4, G_5, G_6 with '1' output. Keep on connecting to the output of G_1 the outputs of the remaining gates one by one. Hence identify exactly what happens when the outputs are shorted.