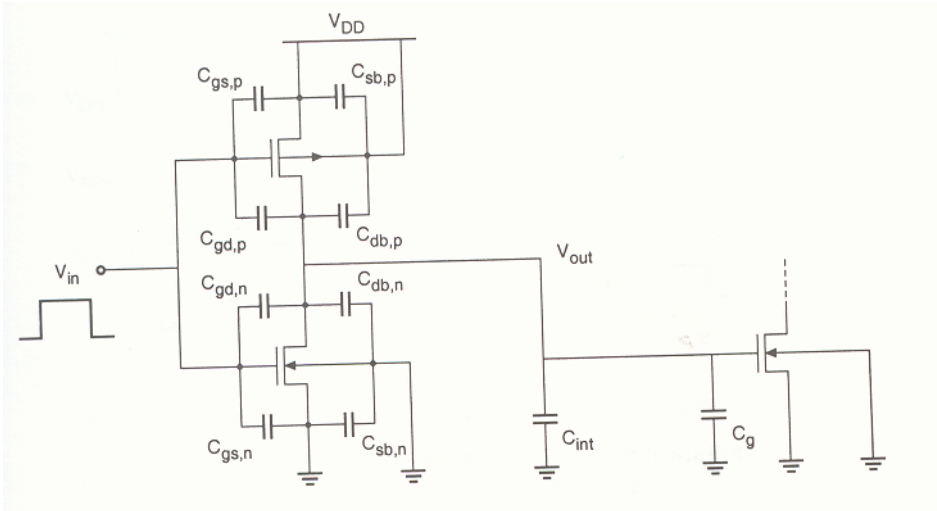


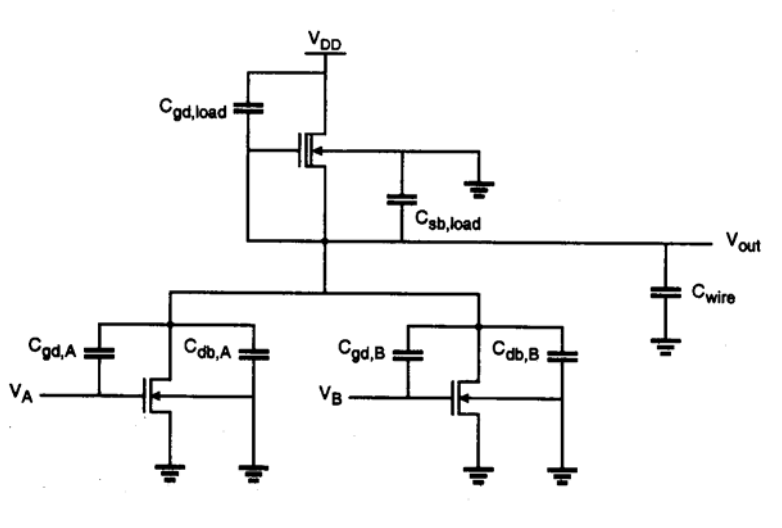
## Load Capacitance

### 1. Inverter



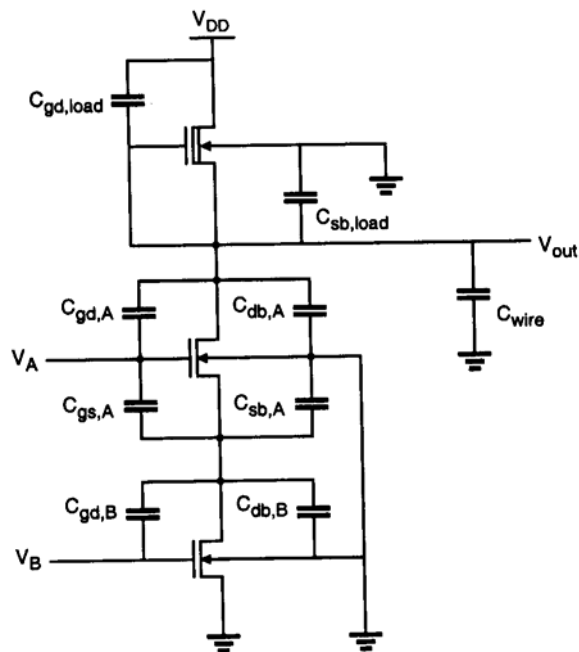
$$C_{load} = C_{gd,n} + C_{gd,p} + C_{db,n} + C_{db,p} + C_{int} + C_g$$

### 2. Two-Input NOR Gate



$$C_{load} = C_{gd,A} + C_{gd,B} + C_{gd,load} + C_{db,A} + C_{db,B} + C_{sb,load} + C_{wire}$$

### 3. Two-Input NAND Gate



**Case1:**

If  $V_B = \text{High}$  and  $V_A$  is changing from High to Low Then:

$$C_{load} = C_{gd,load} + C_{gd,A} + C_{db,A} + C_{sb,load} + C_{wire}$$

**Case2:**

If  $V_A = \text{High}$  and  $V_B$  is changing from High to Low Then:

$$C_{load} = C_{gd,load} + C_{gd,A} + C_{gd,B} + C_{gs,A} + C_{db,A} \\ + C_{db,B} + C_{sb,A} + C_{sb,load} + C_{wire}$$

