

CSCE 5730: Digital CMOS VLSI Design

Assignment 2, Assigned Dated: 28th Feb 2007 (Wed), Due Date: 7th Mar 2007 (Wed)
Instructor: Dr. Saraju P. Mohanty

1. Consider the simple network of Figure 3-7, page-80, and assume that $V_S = 2V$, $R_S = 5\text{ k}\Omega$, and $I_S = 0.2 \times 10^{-6}A$. Find the value of V_D and I_D .
2. Consider the following silicon junction diode: $C_{j0} = 2.5 \times 10^{-2}\text{ F/m}^2$, $A_D = 0.7\mu\text{m}^2$, and $\phi_0 = 0.68V$. What is the junction capacitance of the diode for a supply voltage of $-2.2V$?