2014 Fall   D. K. Jeong
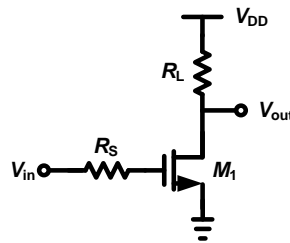
Quiz #3   October 22, 2014

Student ID number :

Student name :

1. In the CS stage of Fig.1, we have $R_S=200\Omega$, $C_{GS}=250fF$, $C_{GD}=80fF$, $C_{DB}=100fF$, $g_m=(150\Omega)^{-1}$, $\lambda=0$, $R_L=2k\Omega$.

[Fig. 1]

1.1 Find two poles of circuit Fig.1 with the aid of Miller's approximation.

1.2 There is a large error between the frequency response of 1.1 and exact transfer function at high frequencies. Find out the exact locations of the **zero(s)** and explain **why Miller's approximation is not accurate.**

※NOTE: Problem 1.2 is changed. Don't calculate poles.

A)