

CMOS Analog Circuit Design Lab

Assignment – 1

1. It is required to design the circuit for the following specifications,

Gain = - 5

Power \leq 1mW

f-3dB = 100 MHz

$C_L = 1\text{pF}$ (+/- 20%)

Output swing \geq 400mV

Also calculate the maximum input swing, which can be tolerated by the circuit without getting into non- linear distortion.

2. It is required to design the circuit for the following specifications,

Gain = -3

Power \leq 0.8mW

f-3dB = 100 MHz

$C_L = 1.5\text{pF}$

Output swing \geq 500mV

Also calculate the maximum input swing, which can be tolerated by the circuit without getting into non- linear distortion.

NOTE : 1. Half of the students in a section should submit the design AND schematic simulation result in the LAB for question number -1 and the other half section should submit the design AND schematic simulation result in the LAB for question number-2.

2. Last date for submission is 18th October 2019