Ministry of Higher Education

King Fahd University of Petroleum & Minerals

Electrical Engineering Department

وزارة التعــليم العــالي

جامعة الملك فهد للبترول و المعادن

قسـم الهندسـة الكهربائيـة

Name:		
Student ID:	Section: 4	Quiz: 2

For the shown circuit, assume $V_{TN} = -V_{TP} = 1V$,
$\mu_n C_{ox} = 2\ \mu_p C_{ox} = 20\ \mu A/V^2$, and
$(W/L)_{Qp} = 2\ (W/L)_{Qn} = 20$.

If $v_I = 0.0V$

    a) What is the status of Q_P (ON or OFF)
    b) What is the status of Q_N (ON or OFF)
    c) Find the value of i_{DP}
    d) Find the value of i_{DN}
    e) Calculate v_o and determine the region of operation for each transistor.