

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

6.101 Introductory Analog Electronics Laboratory
Spring 2003
Problem Set #3
Issued: 2/26/03
Due: 3/5/03

Remember to use standard 5% resistor values. Assume $V_T = 25\text{mV}$, $V_{BE(\text{ON})} = 0.6\text{V}$, and that all capacitors in the circuits are very large. Make appropriate approximations.

- 3.1) Neamen 4.33 page 235, but change $\beta = 200$ and $R_S = 5.1\text{k}\Omega$. Also for part (b) label the Q-point on the graphs.
- 3.2) Neamen 4.52 page 240, but change $0.5\text{k}\Omega$ to $0.51\text{k}\Omega$ and change 50Ω to 51Ω .
- 3.3) Neamen 5.53 page 309, but change $R_1 = 150\text{k}\Omega$ and $R_2 = 62\text{k}\Omega$.
- 3.4) Neamen 5.56 page 309.
- 3.5) Neamen 6.50 page 378, but change $I_{DSS} = 4\text{mA}$, $R_G = 51\text{k}\Omega$, $R_D = 8.2\text{k}\Omega$, $R_L = 4.3\text{k}\Omega$, and $R_{S2} = 240\Omega$.