

**MASSACHUSETTS INSTITUTE OF TECHNOLOGY**  
DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

6.101 Introductory Analog Electronics Laboratory  
Spring 2003  
Problem Set #5  
**Issued: 3/12/03**  
**Due: 3/19/03**

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

5.1) Neamen 14.12 page 915

5.2) Neamen 15.49 page 994

5.3) Neamen 15.55 page 995

5.4) Neamen 11.8 page 709, but use  $\beta=200$ ,  $V_T = 25\text{mV}$ ,  $V_{\text{BE(ON)}} = 0.6\text{V}$ ,  $R_B = 510\Omega$  and  $RC = 51\text{k}\Omega$ .

\* Remember Quiz #2 on 3/19/03