Chapter 3 : Section 3.4

1. Problem 3.50

Chapter 3 : Section 3.5

2. Problem 3.70
3. Problem 3.73

Chapter 3 : Section 3.6

4. Problem 3.77
5. The regulator in Figure 1 employs a zener diode $D_Z$ that is specified to have a 8V drop at a test current of 25mA with $r_Z = 10\Omega$ and $I_{ZK} = 0.2\,mA$.
   (a) Find the value of $R$ needed to obtain an output voltage $V_{out} = 7.8V$ at nominal supply voltage $V_s$ and no load.
   (b) With the value of $R$ as obtained in (a) and no load find the change in $V_{out}$ when there is a $\pm 15\%$ change in $V_s$.
   (c) With the value of $R$ as obtained in (a) and nominal $V_s$ find the value of $V_{out}$ with a load resistance of
      (i) $R_L = 10k\Omega$
      (ii) $R_L = 1k\Omega$

Chapter 3 : Section 3.7

6. Problem 3.91