Note: each of these problems (except the extra credit) can be done in half a page.

1. Exercise 25.2-1

2. Exercise 25.2-6

3. Exercise 34.5-1 (hint: to show the problem is NP-Hard, reduce from the problem Clique discussed in lecture)

4. The problem IndependentSet asks: “Does there exist a set of $k$ vertices in a graph $G$ with no edges between them?” Show that this problem is NP-Complete. (hint: to show the problem is NP-Hard, again reduce from Clique)

5. Extra Credit: Problem 25-1

6. Extra Credit: Exercise 34.1-5

7. Extra Credit: Problem 34-3