

## CS 362, HW6

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*Due: May 3rd, 2005*

**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