Math 412   HW7   3/15/2014   Name: _____

Due Friday, March 21, 2014

Students in section X13 (three credit hours) need to solve any four of the following five problems. Students in section X14 (four credit hours) must solve all five problems.

1. Without using any results on matchings in bipartite graphs, prove directly that for every positive integer k, every k-regular bipartite graph satisfies Tutte's Condition (and therefore, by Tutte's Theorem, has a perfect matching).

2. # 3.3.16 in the book.

3. # 3.3.20 in the book.

4. # 3.3.22 in the book.

5. # 3.3.26 in the book.

Problems below review basic concepts and their ideas could be used in the tests.
WARMUP PROBLEMS:
Section 3.3: # 1, 2, 3, 4, 6.
OTHER INTERESTING PROBLEMS:
Section 3.3: # 7, 8, 10, 11, 15, 22, 25.
Do not write these up!