

Structure of the Exam, version 1.1, corrected two numbers

The exam will have a total of 130 points. There will be two parts on the exam.

The first part will have theory questions, such as; state theorem X, prove the following Y or define what is ment by Z. A list of theorem you should be able to state and results you should be able to prove is given below. You should know all definitions in the chapters included in the course.

The second part will have some problems that you should solve.

You should be able to state the following. That is. I will ask: State X", where X is something from the list below. You should also explain the terminology involved.

König's theorem
Hall's theorem
Stable marriage theorem
Gallai-Edmond's theorem
Gallai-Millgram's theorem
Tutte's theorem on 3-connected graphs (3.2.3)
Menger's theorem
Mader's theorem
Euler's formula (4.2.9)
Kuratowski's and Wagner's theorem (4.4.6)
The four color theorem
Brook's theorem
Vizing's theorem
Markov's inequality
Chebyshev's inequality
Turan's theorem
Hadwiger's conjecture
Szemerédi's regularity Lemma
–something from the last lecture might be added

You should be able to prove the following. (You don't need to know the numbers in the book of the theorems.) You may use the same lemmas used in the book, but not stronger stronger results.

Prop 1.2.2.
Prop 1.3.3.
Prop 1.4.2
König's theorem (2.1.1)
Gallai-Millgram's theorem (2.5.1)
Lemma 3.2.2
Menger's theorem (3.3.1)
Lemma 4.4.2
Brook's theorem (5.2.4)
Thomassen's theorem on five-chooseability (5.4.2)
Ramsey lower bounds (11.1.3)
Theorem 7.4 in extra material on Ramsey numbers
Prop 11.3.1.
Turan's theorem (7.1.1)
–something from the last lecture might be added