List of required theorems

This list is preliminary and is being written in a tremendous hurry, so it is subject to alteration, in particular to shortening. Also, we still have a couple of lectures left.

The page and theorem numbers below refer to my lecture notes.

OBS! Of course, the proofs of some of the results below make use of earlier results. In these cases, it suffices to state the earlier result in your proof.

p.1 : Aritmetikens fundamental sats.
p.5 : Prop. 4.
p.6 : Prop. 5.
p.11 : Euclids algorithm.
p.13 : CRT and Kor. 10.
p.15/16 : Fermat's lilla sats och Euler's sats.
p.17 : Sats 15.
p.21 : Möbius inversion formel.
p.28 : Sats 19, in particular eq. (44).
p.33 : Gauβ' lemma and reciprocity law.
p.37 : Prop. 23.
p.38 : Sats.
p.39 : Prop. 24.
p.41 : Theorem 26, Dirichlet's theorem (know the proof as far as the reduction to proving that $L(1,\chi) \neq 0$, i.e.: from the middle of p.37 (you may assume Theorem 26) to the middle of p.39).
p.45 : Theorem 31.
p.56 : Theorem 37.
p.58 : Sats 42.
p.59 : Kor. 43.
p.63 : Theorem 47.
p.68 : Prop. 48 (in the proof you may quote Thm. 47).
p.75 : Theorem 55.
p.77 : Theorem 60.
p.78 : Prop. 61.
p.85 : Prop. 64.
p.88 : Theorem 67.
p.94 : Prop. 72(ii), i.e.: integral closure of $\mathbf{Z}$.

p.95 : Theorem 73.
p.96 : Prop. 74 (may quote Thm. 73 and eq. (175)).
p.97 : Prop. 76.
p.99 : Props. 77, 78.
p.101 : Sats 81.
p.105 : Prop. 85.
p.108 : Prop. 88 (you could be asked either direction, but not both).
p.110 : Prop. 89.
p.113 : Completion of the proof of the Main Theorem on Dedekind domains (existence and uniqueness proofs), assuming Theorem 90.
p.122 : Sats 99.
p.125 : Sats 101 (odd primes only !).
p.128 : Dirichlet's approximationsats.
p.129 : Sats 103.
p.131 : Sats 104.

HANDOUTS :

Only the material on handouts nr. 4,6,8,13,15 has been/will be proven in class. Hence only this material is examinable.

Of course, you should know the statement of every single result proved in class, and it always helps to have read and understood the proofs. However, absolutely NOTHING contained in remarks or footnotes to the text, or anything which makes reference to another text-book for discussion of something not proven in class is examinable.