REMARKS FOR 2012 EXAM

Question 1

You can skip part (c) since we don't consider finite fields. Parts (b), (d), (e), (f) and (g) are all reasonable questions, but you should check our lecture notes for the definitions we are using this year. Moreover, in parts (f) and (g), you should understand (every occurence of) the word 'variety' as 'algebraic set'.

Question 2

You can skip parts (c) and (e) since we didn't cover these proofs. You can also skip the last question in part (d) as well as part (f) since we didn't define the regular locus of a rational function.

Question 3

In part (c), you can assume the field K has characteristic 0.

Question 4

You can skip part (b) since we didn't cover this proof. Also skip parts (c) and (d) since we didn't define the rationality of an affine variety.