

York University
CSE 2001 – Unit 6.0 Proof Systems and NP
Instructor: Jeff Edmonds

Read Jeff's notes. Read the book. Go to class. Ask lots of question. Study the slides. Work hard on solving these questions on your own. Talk to your friends about it. Talk to Jeff about it. Only after this should you read the posted solutions. Study the solutions. Understand the solutions. Memorize the solutions. The questions on the tests will be different. But the answers will be surprisingly close.

1. What did Godel proof about proof systems?
Give few sentence intuition of the proof.
2. NP
 - (a) How do you convince your boss that the computational problem he wants you to solve is likely too hard to solve in general?
 - (b) What does it mean for a problem P to be in NP (Non-Deterministic Polynomial Time)?
 - (c) Why is 3-Col in NP?
 - (d) What does it mean for a problem P to be NP-Complete.