Assignment 2—Chapters 1-3
CptS 425/580—Network Security
Assigned: 6 September 2005
Due: 13 Sept. 2005, 5:45pm

Explain and/or justify all of your answers. Short answers are sufficient, but ‘Yes’/’No’ answers will not receive full credit. If you make any assumptions, please state them.

Chapter 1
Answer the following questions from the Exercises (pgs 22-25).
15 Pts Question 1.3
15 Pts Question 1.5
15 Pts Question 1.5
10 Pts Question 1.8
10 Pts Question 1.9
10 Pts Question 1.20

Chapter 2
Answer the following question from the Exercises (pg. 35)
30 Pts Question 1

Chapter 3
15 Pts Why is Theorem 3-2 an important and basic theoretical result in the field of Computer and Network Security?
30 Pts Using the algorithms given in the proof of Theorem 3-2, specify the access control matrix that will result after five steps of the following Turing machine on the given tape configuration.

Tape Configuration: A B B A b b ...

Turing Machine:
K = { p, q, r } initial state = p, halt state = r
M = { A, B }
δ = δ (p,A) = (p,A,R)
δ (p,B) = (q,A,L)
δ (q,A) = (p,A,R)
δ (q,B) = (h,A,R)